

WIDLIGHT AVENUE PHASE 4

WIDLIGHT, FLORIDA



LOCATION MAP
N.T.S.

PREPARED FOR

RAYDIENT PLACES + PROPERTIES

1 RAYONIER WAY
WIDLIGHT, FLOIRDA 32097
(844) 877-5263



14775 Old St. Augustine Road
Jacksonville, FL 32258
(904) 642-8990
CA - 00002584 LC - 0000316

OWNER:	RAYDIENT PLACES + PROPERTIES 1 RAYONIER WAY WIDLIGHT, FLORIDA 32097 (844) 877-5263
DEVELOPER:	RAYDIENT PLACES + PROPERTIES 1 RAYONIER WAY WIDLIGHT, FLORIDA 32097 (844) 877-5263
SURVEYOR:	L.D. BRADLEY LAND SURVEYORS 510 SOUTH 5TH STREET MACLENNY, FLORIDA 32063 (904) 786-8400
LANDSCAPE ARCHITECT:	ENGLAND, THIMS & MILLER, INC. 14775 OLD ST. AUGUSTINE ROAD JACKSONVILLE, FL 32258 (904) 642-8990
ENGINEER:	ENGLAND, THIMS & MILLER, INC. 14775 OLD ST. AUGUSTINE ROAD JACKSONVILLE, FL 32258 (904) 642-8990

NOTE:
IF YOU DIG IN FLORIDA, YOU ARE REQUIRED TO
CALL SUNSHINE STATE ONE-CALL OF FLORIDA,
INC. 1-800-432-4770 FOR LOCATES. IT'S THE
LAW.

JEA AVAILABILITY #: 2024-0160

JEA DESIGN STANDARDS: 2024

DRAWING INDEX			
PDF SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	REVISION
1	1	COVER	
2	2	ENGINEER SIGNATURE SHEET	
3	3	GENERAL NOTES AND LEGEND	
4	4	MASTER SITE PLAN	
5	5	MASTER UTILITY PLAN	
6	6	DEMOLITION PLAN	
7	7	PRE DEVELOPED DRAINAGE PLAN	
8	8	POST DEVELOPED DRAINAGE PLAN	
9-10	9A-9B	PLAN AND PROFILE	
11	9C	PLAN AND PROFILE - SMF PLAN	
12	9D	TEMPORARY PARKING FACILITY	
13	9E	UTILITY CROSS TABLE	
14-17	10A-10D	PAVING AND DRAINAGE DETAILS	
18	11	JEA STANDARD GENERAL NOTES LEGEND, AND SHEET INDEX	
19-24	12A-12F	JEA STANDARD WATER AND RECLAIMED DETAILS	
25-29	13A-13E	JEA STANDARD SANITARY SEWER DETAILS	
30	14	SEDIMENT AND EROSION CONTROL PLAN	
31	15	SEDIMENT AND EROSION CONTROL DETAILS	
32	16	STORMWATER POLLUTION PREVENTION PLAN	
33	17	CONTRACTOR CERTIFICATION	
34	LC-00	LANDSCAPE COVER	
35	LC-01	LANDSCAPE CODE SUMMARY	
36-38	LC-02-LC-04	LANDSCAPE PLAN	
39	LC-05	LANDSCAPE NOTES & SPECIFICATIONS	
40	LC-06	LANDSCAPE SCHEDULE & DETAILS	
41-42	IR-01-IR-02	IRRIGATION PLAN	
43	IR-03	IRRIGATION CODE SUMMARY AND NOTES	
44	HS-00	HARDSCAPE COVER	
45-46	HS-01-HS-02	HARDSCAPE PLAN	
47	HS-03	HARDSCAPE DETAILS	

VERTICAL DATUM USED FOR
THIS PROJECT: NAVD 1988

COVER

WIDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
1

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com
REG-00002584 LC-0000316

Trusted
Advisors,
Creating
Community.

ETM
ENGLAND-THIMS & MILLER

ETM NO. 19-239-01-055
DRAWN BY: TS
DESIGNED BY: JZB
CHECKED BY: JZB
DATE: MAY 2024

PLANS PREPARED UNDER
THE DIRECTION OF:
JOHN ZACHARY BRECHT
P.E. NUMBER: 66559

THE FLORIDA PROFESSIONAL ENGINEER NAMED HEREIN SHALL
BE RESPONSIBLE FOR THE DRAWINGS LISTED IN THIS BOX IN
ACCORDANCE WITH RULE 61G15-23-003, F.A.C. THESE SHEETS
HAVE BEEN SIGNED AND SEALED USING A DIGITAL SIGNATURE
BY: JOHN ZACHARY BRECHT P.E. NUMBER: 66559

ENGLAND—THIMS & MILLER, INC.
14775 OLD ST. AUGUSTINE ROAD
JACKSONVILLE, FLORIDA 32258
PHONE (904) 642-8990
CERTIFICATE OF AUTHORIZATION NUMBER: 00002584

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED
SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED
ON ANY ELECTRONIC COPIES

DRAWING INDEX			
PDF SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	REVISION
1	1	COVER	
2	2	ENGINEER SIGNATURE SHEET	
3	3	GENERAL NOTES AND LEGEND	
4	4	MASTER SITE PLAN	
5	5	MASTER UTILITY PLAN	
6	6	DEMOLITION PLAN	
7	7	PRE DEVELOPED DRAINAGE PLAN	
8	8	POST DEVELOPED DRAINAGE PLAN	
9-10	9A-9B	PLAN AND PROFILE	
11	9C	PLAN AND PROFILE - SMF PLAN	
12	9D	TEMPORARY PARKING FACILITY	
13	9E	UTILITY CROSS TABLE	
14-17	10A-10D	PAVING AND DRAINAGE DETAILS	
18	11	JEA STANDARD GENERAL NOTES LEGEND, AND SHEET INDEX	
19-24	12A-12F	JEA STANDARD WATER AND RECLAIMED DETAILS	
25-29	13A-13E	JEA STANDARD SANITARY SEWER DETAILS	
30	14	SEDIMENT AND EROSION CONTROL PLAN	
31	15	SEDIMENT AND EROSION CONTROL DETAILS	
32	16	STORMWATER POLLUTION PREVENTION PLAN	
33	17	CONTRACTOR CERTIFICATION	

THE FLORIDA REGISTERED LANDSCAPE ARCHITECT NAMED
HEREIN SHALL BE RESPONSIBLE FOR THE DRAWINGS LISTED IN
THIS BOX. THESE SHEETS HAVE BEEN SIGNED AND SEALED
USING A DIGITAL SIGNATURE BY:
JONATHAN F. KORMAN, PLA L.A. NUMBER: LA6667357

ENGLAND—THIMS & MILLER, INC.
14775 OLD ST. AUGUSTINE ROAD
JACKSONVILLE, FLORIDA 32258
PHONE (904) 642-8990
CERTIFICATE OF AUTHORIZATION NUMBER: 00002584

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED
SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED
ON ANY ELECTRONIC COPIES.

DRAWING INDEX			
PDF SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	REVISION
34	LC-00	LANDSCAPE COVER	
35	LC-01	LANDSCAPE CODE SUMMARY	
36-38	LC-02-LC-04	LANDSCAPE PLAN	
39	LC-05	LANDSCAPE NOTES & SPECIFICATIONS	
40	LC-06	LANDSCAPE SCHEDULE & DETAILS	
41-42	IR-01-IR-02	IRRIGATION PLAN	
43	IR-03	IRRIGATION CODE SUMMARY AND NOTES	
44	HS-00	HARDSCAPE COVER	
45-46	HS-01-HS-02	HARDSCAPE PLAN	
47	HS-03	HARDSCAPE DETAILS	

ENGINEER SIGNATURE SHEET

**WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPRIETÉ**

2

Trusted
14775 Old St. Augustine Rd.

(904) 642-8990

www.etminc.com

BEG-00002584 | C-0000316

REVISIONS:

ETM NO. 19-239-01-055

TS

DESIGNED BY: JZB

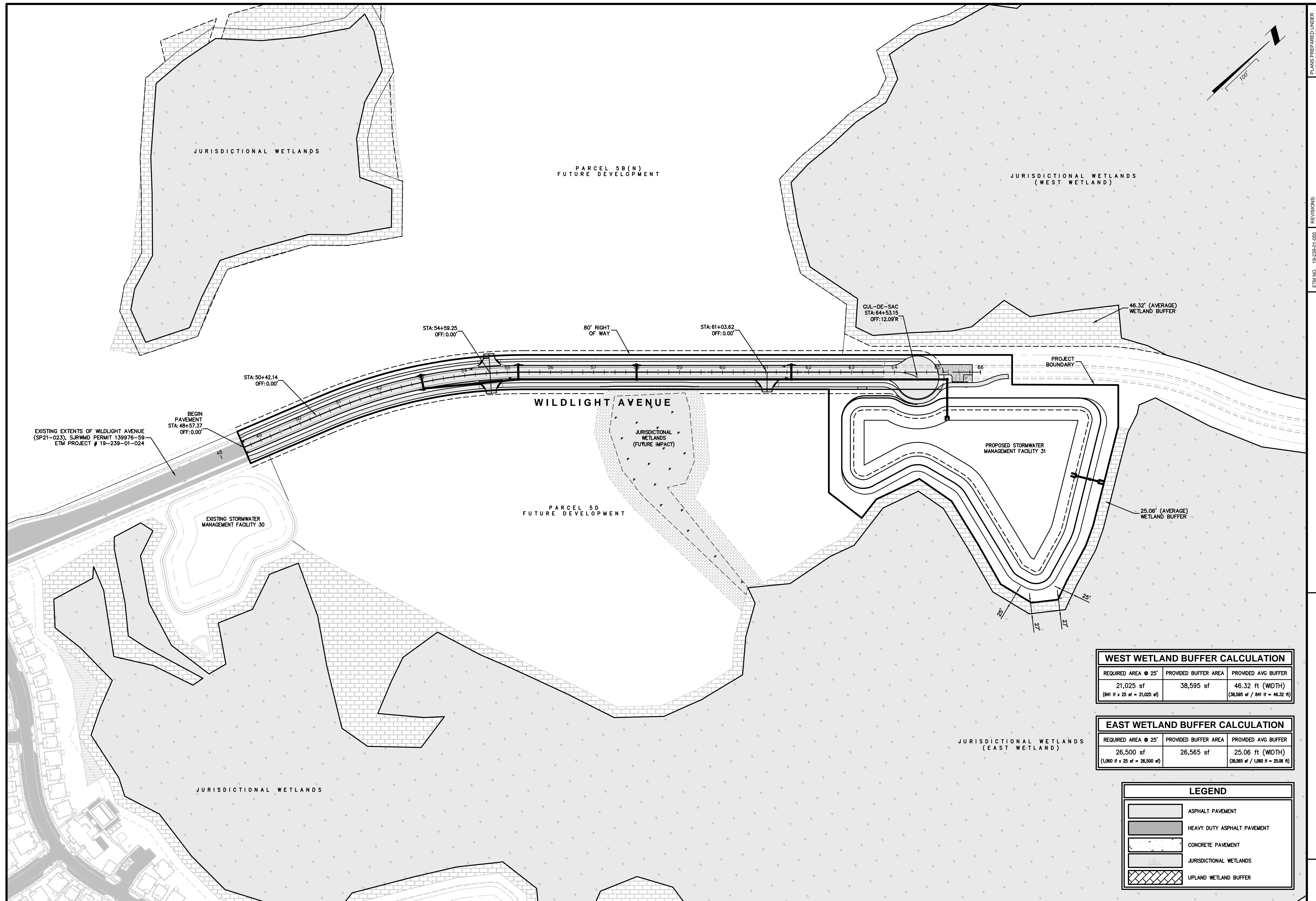
CHECKED BY: JZB

DATE: MAY 2024

PLANS PREPARED UNDER
THE DIRECTION OF:

JOHN ZACHARY BRECHT
P.E. NUMBER: 6655

PLOTTED: June 28, 2024 - 8:59 AM, BY: Anthony Dornes



THE DIRECTION OF:
JOHN ZACHARY BRECHT
P.E. NUMBER: 66559
AM, BY: Anthony Dornes

PLOTTED: June 28, 2024 - 9:00

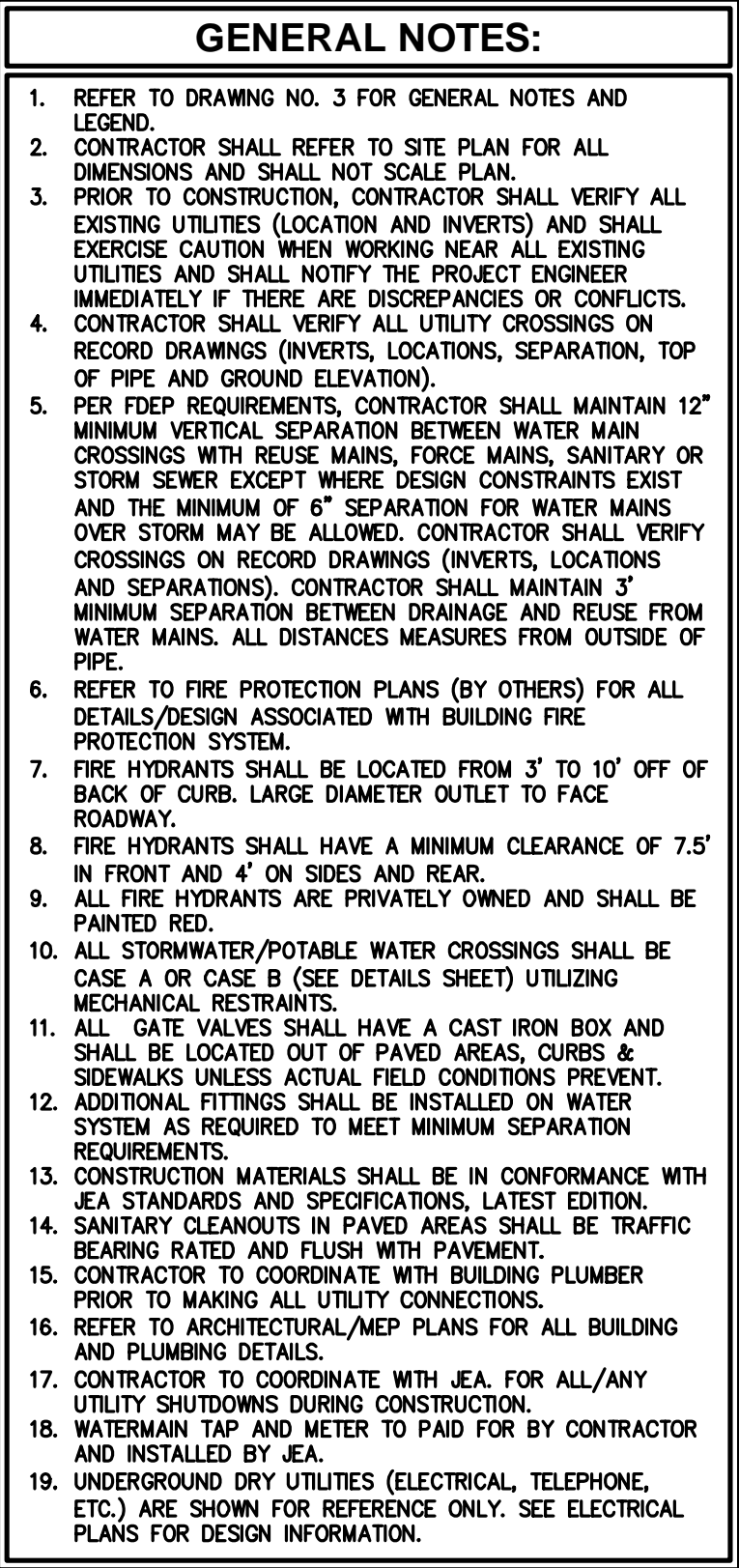
DRAWN BY:	TS
DESIGNED BY:	JZB
CHECKED BY:	JZB
DATE:	MAY 2024

14111 Edgewater Drive, Ste. 200
Orlando, Florida 32804
(407) 536-5379
www.etm-inc.com
CA-00002584 LC-0000316

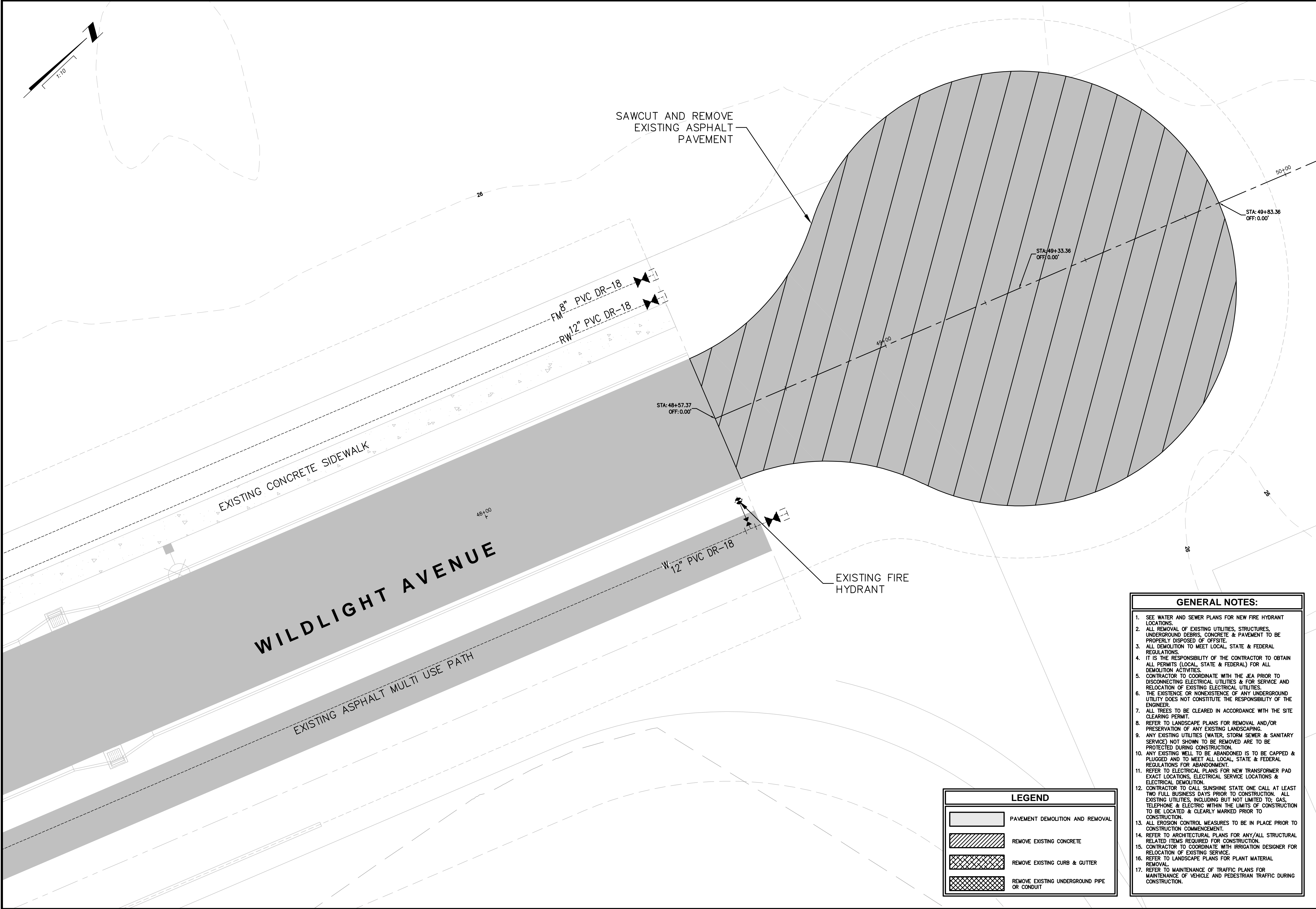
Trusted
Advisors,
Creating
Community®

ETM
ENGLAND-THIMS & MILLER

DRAWING NUMBER	4	MASTER SITE PLAN
		WILDLIGHT AVENUE PHASE 4
		RAYDIENT PLACES + PROPERTIES FOR WILDLIGHT AVENUE PHASE 4



\\1919-239-01 - Royoner Work\19-239-01 - 055 Wildlight Avenue Extension\LandDev\Design Plots\WUTL-19-239-01-055.dwg PLOTTED: June 28, 2024 - 9:00 AM, BY: Anthony Dornes



SAWCUT AND REMOVE
EXISTING ASPHALT
PAVEMENT

FM 8" PVC DR-18
RW 12" PVC DR-18

STA: 48+57.37
OFF: 0.00'

W 12" PVC DR-18

EXISTING FIRE
HYDRANT

STA: 49+33.36
OFF: 0.00'

STA: 49+83.36
OFF: 0.00'

WILDLIGHT AVENUE

EXISTING CONCRETE SIDEWALK

EXISTING ASPHALT MULTI USE PATH

LEGEND	
	PAVEMENT DEMOLITION AND REMOVAL
	REMOVE EXISTING CONCRETE
	REMOVE EXISTING CURB & GUTTER
	REMOVE EXISTING UNDERGROUND PIPE OR CONDUIT

GENERAL NOTES:	
1.	SEE WATER AND SEWER PLANS FOR NEW FIRE HYDRANT LOCATIONS.
2.	ALL REMOVAL OF EXISTING UTILITIES, STRUCTURES, UNDERGROUND DEBRIS, CONCRETE & PAVEMENT TO BE PROPERLY DISPOSED OF OFFSITE.
3.	ALL DEMOLITION TO MEET LOCAL, STATE & FEDERAL REGULATIONS.
4.	IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS (LOCAL, STATE & FEDERAL) FOR ALL DEMOLITION ACTIVITIES.
5.	CONTRACTOR TO COORDINATE WITH THE JEA PRIOR TO DISCONNECTING ELECTRICAL UTILITIES & FOR SERVICE AND RELOCATION OF EXISTING ELECTRICAL UTILITIES.
6.	THE EXISTENCE OR NONEXISTENCE OF ANY UNDERGROUND UTILITY DOES NOT CONSTITUTE THE RESPONSIBILITY OF THE ENGINEER.
7.	ALL TREES TO BE CLEARED IN ACCORDANCE WITH THE SITE CLEARING PERMIT.
8.	REFER TO LANDSCAPE PLANS FOR REMOVAL AND/OR PRESERVATION OF ANY EXISTING LANDSCAPING.
9.	ANY EXISTING UTILITIES (WATER, STORM SEWER & SANITARY SERVICE) NOT SHOWN TO BE REMOVED ARE TO BE PROTECTED DURING CONSTRUCTION.
10.	ANY EXISTING WELL TO BE ABANDONED IS TO BE CAPPED & PLUGGED AND TO MEET ALL LOCAL, STATE & FEDERAL REGULATIONS FOR ABANDONMENT.
11.	REFER TO ELECTRICAL PLANS FOR NEW TRANSFORMER PAD EXACT LOCATIONS, ELECTRICAL SERVICE LOCATIONS & ELECTRICAL DEMOLITION.
12.	CONTRACTOR TO CALL SUNSHINE STATE ONE CALL AT LEAST TWO FULL BUSINESS DAYS PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES, INCLUDING BUT NOT LIMITED TO; GAS, TELEPHONE & ELECTRIC WITHIN THE LIMITS OF CONSTRUCTION TO BE LOCATED & CLEARLY MARKED PRIOR TO CONSTRUCTION.
13.	ALL EROSION CONTROL MEASURES TO BE IN PLACE PRIOR TO CONSTRUCTION COMMENCEMENT.
14.	REFER TO ARCHITECTURAL PLANS FOR ANY/ALL STRUCTURAL RELATED ITEMS REQUIRED FOR CONSTRUCTION.
15.	CONTRACTOR TO COORDINATE WITH IRRIGATION DESIGNER FOR RELOCATION OF EXISTING SERVICE.
16.	REFER TO LANDSCAPE PLANS FOR PLANT MATERIAL REMOVAL.
17.	REFER TO MAINTENANCE OF TRAFFIC PLANS FOR MAINTENANCE OF VEHICLE AND PEDESTRIAN TRAFFIC DURING CONSTRUCTION.

ETM
ENGLAND-THIMS & MILLER

Trusted
Advisors,
Creating
Community

1411 Edgewater Drive, Ste. 200
Orlando, Florida 32804
(407) 536-5379
www.etmnc.com
CA-00002584 LC-0000316

DEMOLITION PLAN

WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
6

PLANS PREPARED UNDER
THE DIRECTION OF:

ETM NO. 19-239-01-055

REVISIONS:

DESIGNED BY: JZB

CHECKED BY: JZB

DATE: MAY 2024

JOHN ZACHARY BRECHT
P.E. NUMBER: 66559

PLANNED UNDER
THE DIRECTION OF:

ETM NO. 19-239-01-055

REVISIONS:

DESIGNED BY: JZB

CHECKED BY: JZB

DATE: MAY 2024

JOHN ZACHARY BRECHT
P.E. NUMBER: 66559

PLANNED UNDER
THE DIRECTION OF:

ETM NO. 19-239-01-055

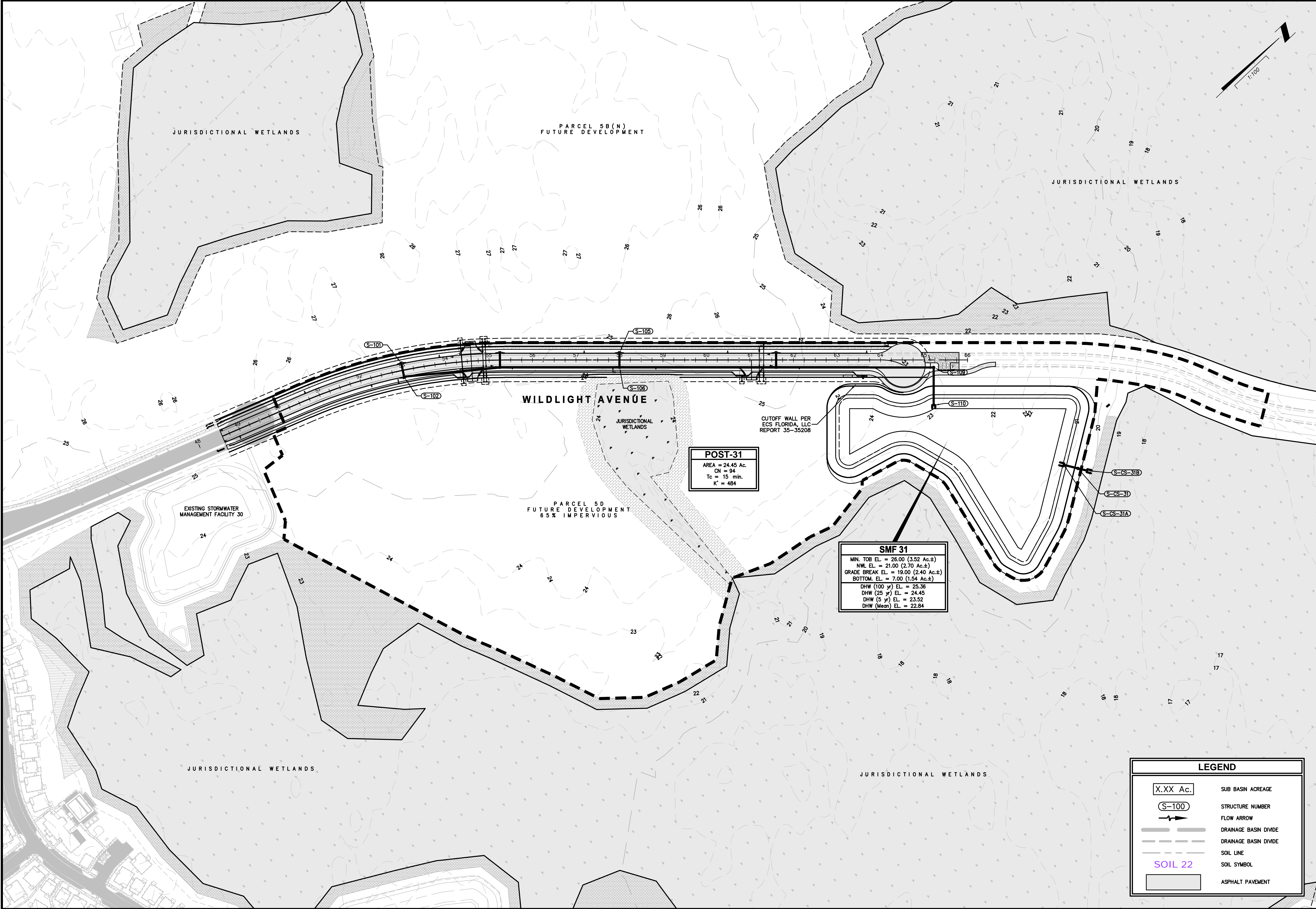
REVISIONS:

DESIGNED BY: JZB

CHECKED BY: JZB

DATE: MAY 2024

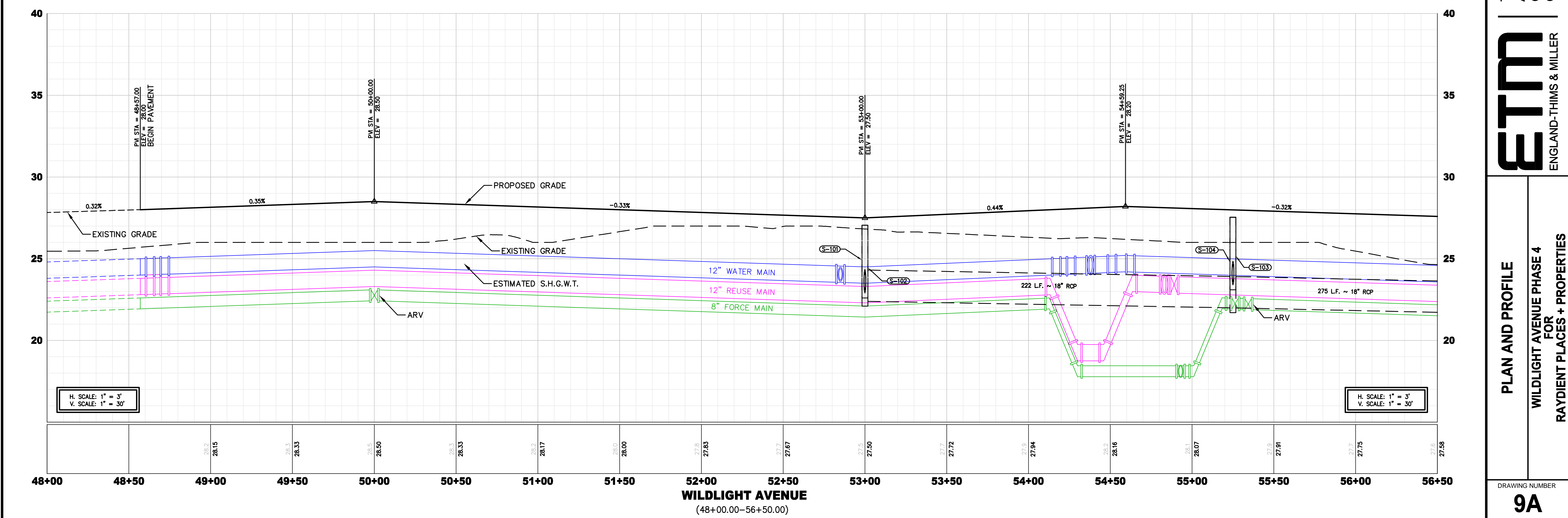
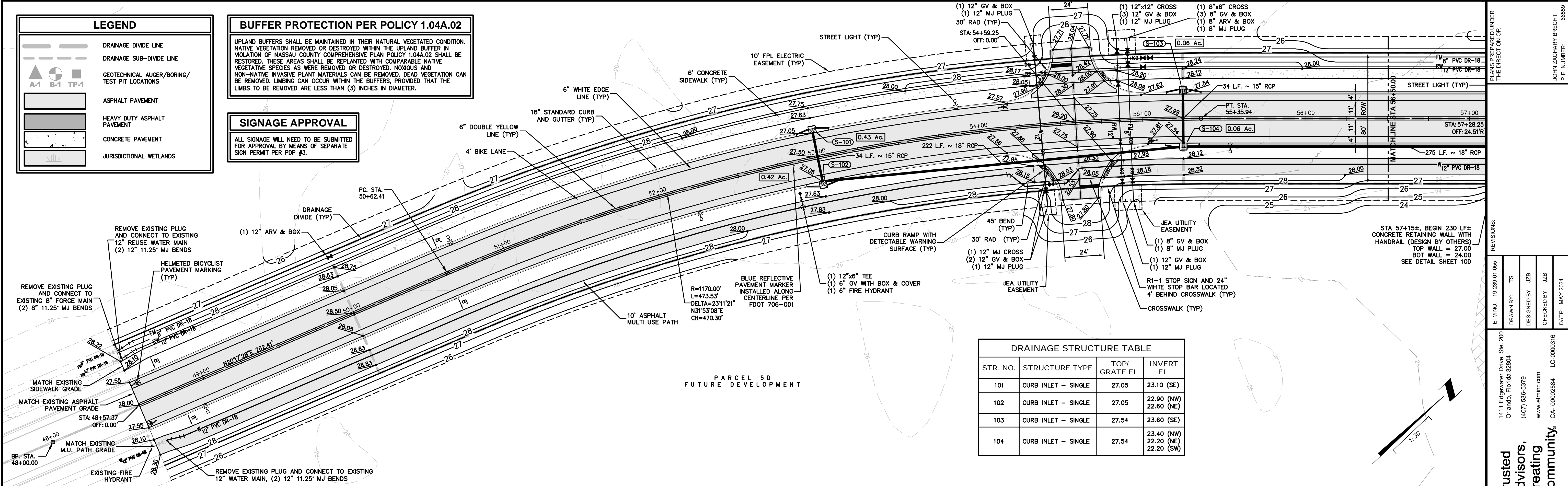
JOHN ZACHARY BRECHT
P.E. NUMBER: 66559



LEGEND

X.XX Ac.	SUB BASIN ACREAGE
S-100	STRUCTURE NUMBER
	FLOW ARROW
	DRAINAGE BASIN DIVIDE
	DRAINAGE BASIN DIVIDE
	SOIL LINE
SOIL 22	SOIL SYMBOL
	ASPHALT PAVEMENT

POST DEVELOPED DRAINAGE PLAN WILDLIGHT AVENUE PHASE 4 FOR RAYDIENT PLACES + PROPERTIES		ETM ENGLAND-THIMS & MILLER		Trusted Advisors, Creating Community,		1411 Edgewater Drive, Ste. 200 Orlando, Florida 32804 (407) 536-5379 www.etmnc.com CA-00002584 LC-0000316		ETM NO. 19-239-01-055 DRAWN BY: TS DESIGNED BY: JZB CHECKED BY: JZB DATE: MAY 2024		PLANS PREPARED UNDER THE DIRECTION OF: JOHN ZACHARY BRECHT P.E. NUMBER: 66559	
DRAWING NUMBER <div style="font-size: 2em; font-weight: bold; margin-top: 5px;">8</div>		PLOTTED: June 28, 2024 - 9:03 AM, BY: Anthony Dornes									



PLANS PREPARED UNDER THE DIRECTION OF:

JOHN ZACHARY BRECHT
P.E. NUMBER: 66559

REVISIONS:

REV. NO.	DESCRIPTION	DATE
19-239-01-055	TS	
19-239-01-055	TS	
19-239-01-055	TS	
19-239-01-055	TS	

1411 Edgewater Drive, Ste. 200
Orlando, Florida 32804
(407) 536-5379
www.etm-inc.com

Trusted Advisors, Creating Community.

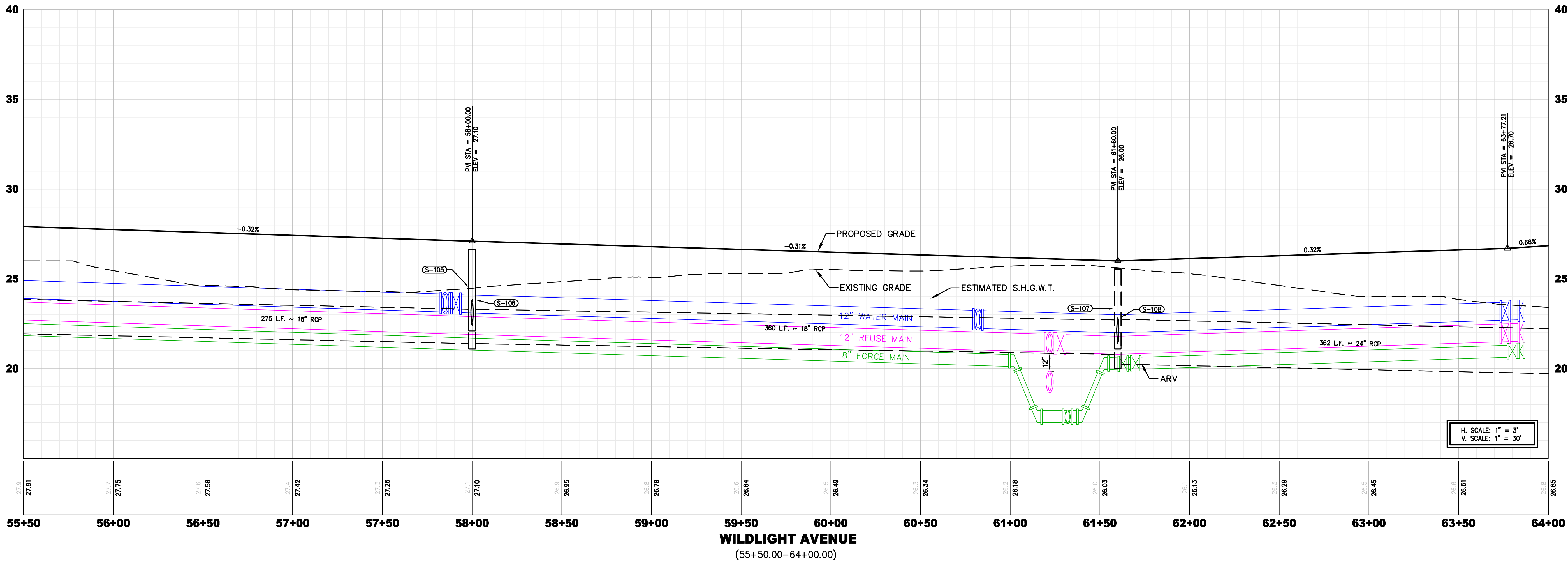
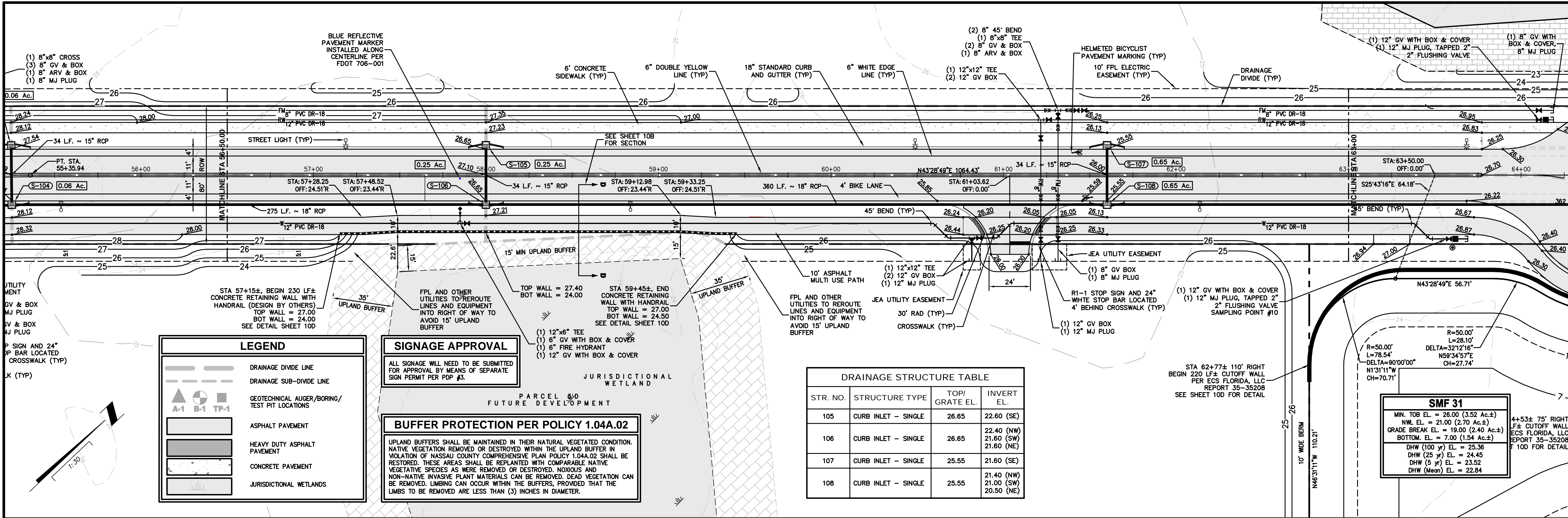
ETM

ENGLAND-THIMS & MILLER

DRAWING NUMBER

9A

PLOTTED: June 28, 2024 - 9:04 AM, BY: Anthony Dornes



PLANS PREPARED UNDER THE DIRECTION OF:

ETM NO. 19-239-01-055

DRAWN BY: TS

DESIGNED BY: JZB

CHECKED BY: JZB

DATE: MAY 2024

1411 Edgewater Drive, Ste. 200
Orlando, Florida 32804
(407) 536-5379
www.etmnc.com

Trusted Advisors, Creating Community.

ETM

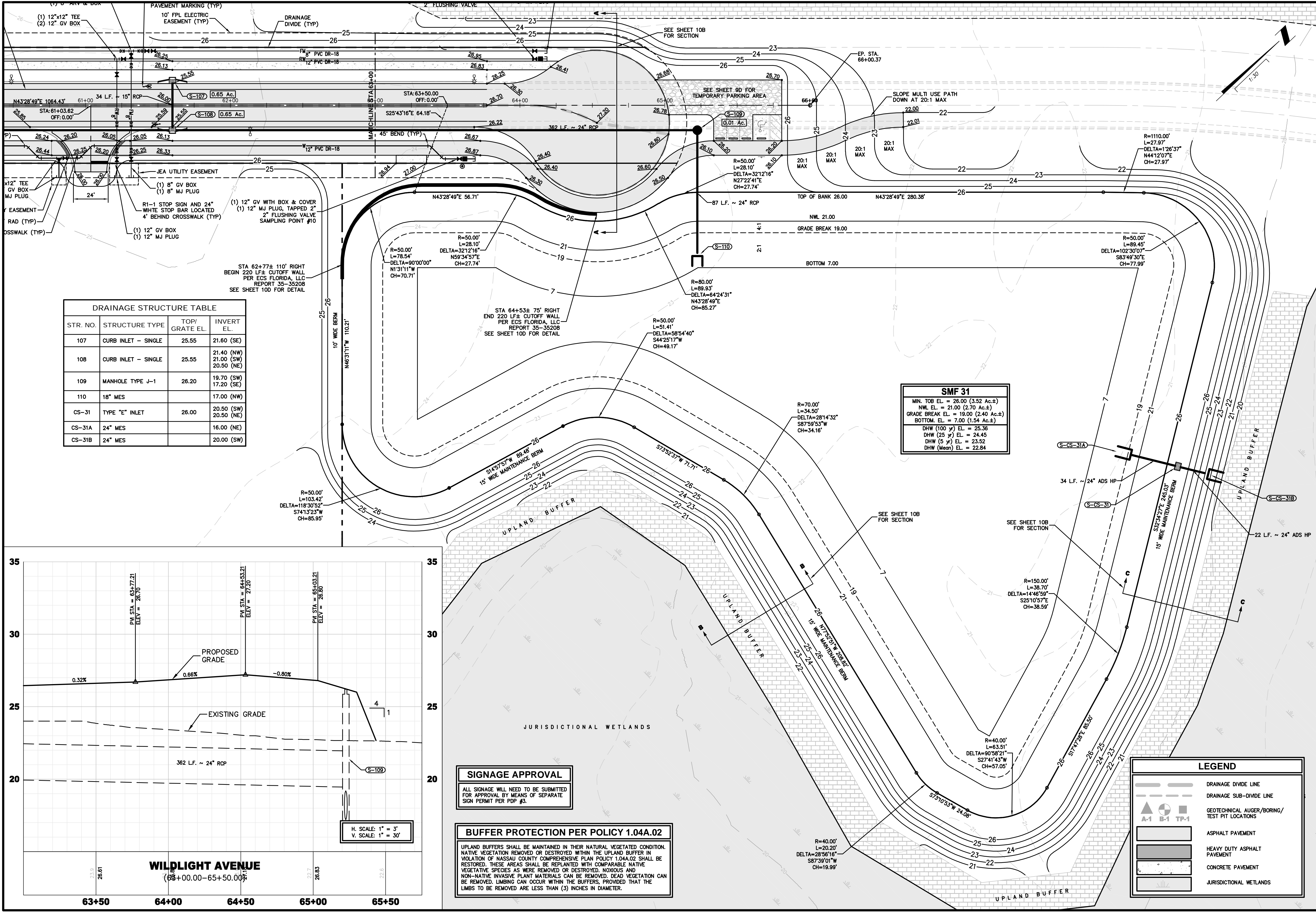
ENGLAND-THIMS & MILLER

DRAWING NUMBER

9B

PLotted: June 28, 2024 - 9:04 AM, BY: Anthony Dornes

JOHN ZACHARY BRECHT
P.E. NUMBER: 66559



DRAINAGE STRUCTURE TABLE			
STR. NO.	STRUCTURE TYPE	TOP/ GRATE EL.	INVERT EL.
107	CURB INLET - SINGLE	25.55	21.60 (SE)
108	CURB INLET - SINGLE	25.55	21.40 (NW) 21.00 (SW) 20.50 (NE)
109	MANHOLE TYPE J-1	26.20	19.70 (SW) 17.20 (SE)
110	18" MES		17.00 (NW)
CS-31	TYPE "E" INLET	26.00	20.50 (SW) 20.50 (NE)
CS-31A	24" MES		16.00 (NE)
CS-31B	24" MES		20.00 (SW)

SMF 31	
MIN. TOB EL. = 26.00 (3.52 Ac.±)	
NWL EL. = 21.00 (2.70 Ac.±)	
GRADE BREAK EL. = 19.00 (2.40 Ac.±)	
BOTTOM EL. = 7.00 (1.54 Ac.±)	
DHW (100 yr) EL. = 25.36	
DHW (25 yr) EL. = 24.45	
DHW (5 yr) EL. = 23.52	
DHW (Mean) EL. = 22.84	

LEGEND	
	DRAINAGE DIVIDE LINE
	DRAINAGE SUB-DIVIDE LINE
	GEOTECHNICAL AUGER/BORING/ TEST PIT LOCATIONS
	ASPHALT PAVEMENT
	HEAVY DUTY ASPHALT PAVEMENT
	CONCRETE PAVEMENT
	JURISDICTIONAL WETLANDS

SIGNAGE APPROVAL

ALL SIGNAGE WILL NEED TO BE SUBMITTED FOR APPROVAL BY MEANS OF SEPARATE SIGN PERMIT PER PDP #3.

BUFFER PROTECTION PER POLICY 1.04A.02

UPLAND BUFFERS SHALL BE MAINTAINED IN THEIR NATURAL VEGETATED CONDITION. NATIVE VEGETATION REMOVED OR DESTROYED WITHIN THE UPLAND BUFFER IN VIOLATION OF MASSAU COUNTY COMPREHENSIVE PLAN POLICY 1.04A.02 SHALL BE RESTORED. THESE AREAS SHALL BE REPLANTED WITH COMPARABLE NATIVE VEGETATIVE SPECIES AS WERE REMOVED OR DESTROYED. NOXIOUS AND NON-NATIVE INVASIVE PLANT MATERIALS CAN BE REMOVED. DEAD VEGETATION CAN BE REMOVED. LIMBING CAN OCCUR WITHIN THE BUFFERS, PROVIDED THAT THE LIMBS TO BE REMOVED ARE LESS THAN (3) INCHES IN DIAMETER.

PLANS PREPARED UNDER THE DIRECTION OF:
JOHN ZACHARY BRECHT
P.E. NUMBER: 66559

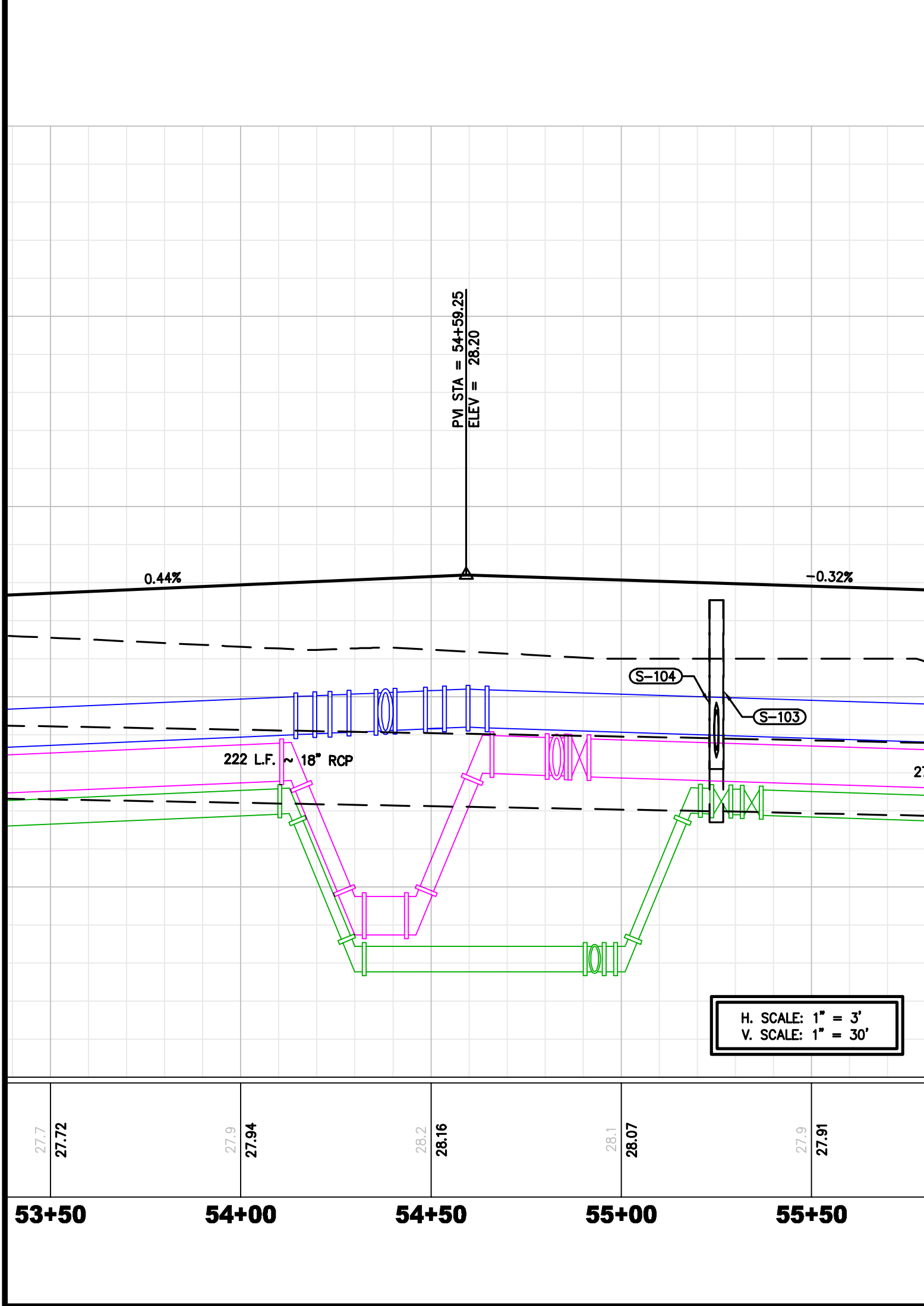
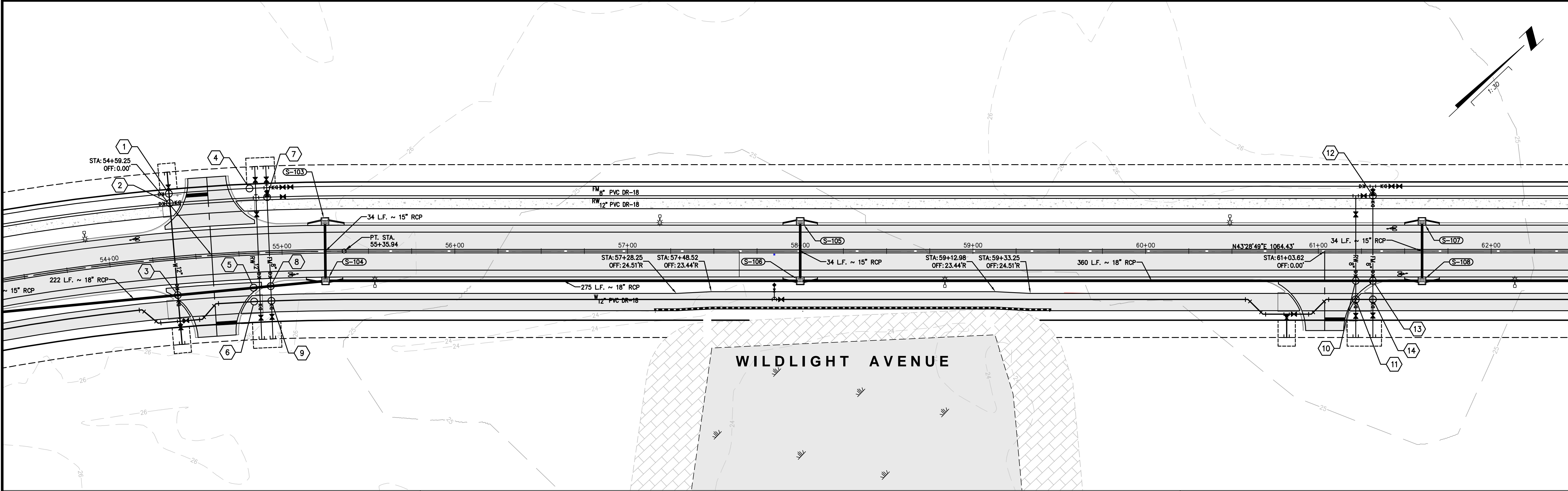
REVISIONS:
ETM NO. 19-239-01-055
DRAWN BY: TS
DESIGNED BY: JZB
CHECKED BY: JZB
DATE: MAY 2024

1411 Edgewater Drive, Ste. 200
Orlando, Florida 32804
(407) 536-5379
www.etmnc.com
CA-00002584 LC-0000316

**Trusted
Advisors,
Creating
Community.**
ETM
ENGLAND-THIMS & MILLER

PLAN AND PROFILE - SMF PLAN
WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
9C



UTILITY CROSSING SCHEDULE											
PROJECT NAME:		WILDLIGHT AVENUE EXTENSION				PROJECT NO:		19-239-01-055			
AVAILABILITY NO:		2023-2025				COUNTY:		Nassau			
SHEET NO	CROSSING NO	ROAD	STATION	FG ELEV @ CROSSING (FT)	TOP PIPE TYPE/SIZE (IN)	TOP OF TOP PIPE (FT)	BOTTOM ELEV OF TOP PIPE	BOTTOM PIPE TYPE/SIZE	INVERT ELEV OF BOTTOM	TOP ELEV OF BOTTOM PIPE (FT)	CLEARANCE B/W PIPES (FT)
9A	1	WILDLIGHT AVENUE	54+37.51 37.5' L	28.41	DR-18 12"	25.41	24.43	DR-18 8"	22.80	23.43	1.00
9A	2	WILDLIGHT AVENUE	54+37.53 32.0' L	28.20	DR-18 12"	25.20	24.22	DR-18 12"	22.31	23.23	1.00
9A	3	WILDLIGHT AVENUE	54+37.74 21.4' R	27.93	RCP 18"	24.36	22.15	DR-18 12"	20.24	21.16	1.00
9A	4	WILDLIGHT AVENUE	54+82.85 37.5' L	28.45	DR-18 12"	25.45	24.47	DR-18 8"	22.84	23.47	1.00
9A	5	WILDLIGHT AVENUE	54+82.60 20.0' R	27.92	RCP 18"	24.28	22.07	DR-18 12"	20.16	21.08	1.00
9A	6	WILDLIGHT AVENUE	54+82.57 28.0' R	28.06	DR-18 12"	25.06	24.08	DR-18 12"	22.17	23.09	1.00
9A	7	WILDLIGHT AVENUE	54+92.48 32.0' L	28.37	DR-18 12"	25.37	24.39	DR-18 8"	22.76	23.39	1.00
9A	8	WILDLIGHT AVENUE	54+92.70 19.5' R	27.98	RCP 18"	24.26	22.05	DR-18 8"	20.42	21.05	1.00
9A	9	WILDLIGHT AVENUE	54+92.74 28.0' R	28.15	DR-18 12"	25.15	24.17	DR-18 8"	22.54	23.17	1.00
9B	10	WILDLIGHT AVENUE	61+21.62 17.2" R	26.08	RCP 18"	23.06	20.85	DR-18 12"	18.94	19.86	1.00
9B	11	WILDLIGHT AVENUE	61+62.62 28.0' R	26.10	DR-18 12"	23.10	22.12	DR-18 12"	20.21	21.13	1.00
9B	12	WILDLIGHT AVENUE	61+31.55 32.0' L	26.36	DR-18 12"	23.36	22.38	DR-18 8"	20.75	21.38	1.00
9B	13	WILDLIGHT AVENUE	61+31.55 17.2' R	25.78	RCP 18"	23.05	20.84	DR-18 8"	19.21	19.84	1.00
9B	14	WILDLIGHT AVENUE	61+31.55 28.0' R	26.14	DR-18 12"	23.14	22.16	DR-18 8"	20.53	21.16	1.00

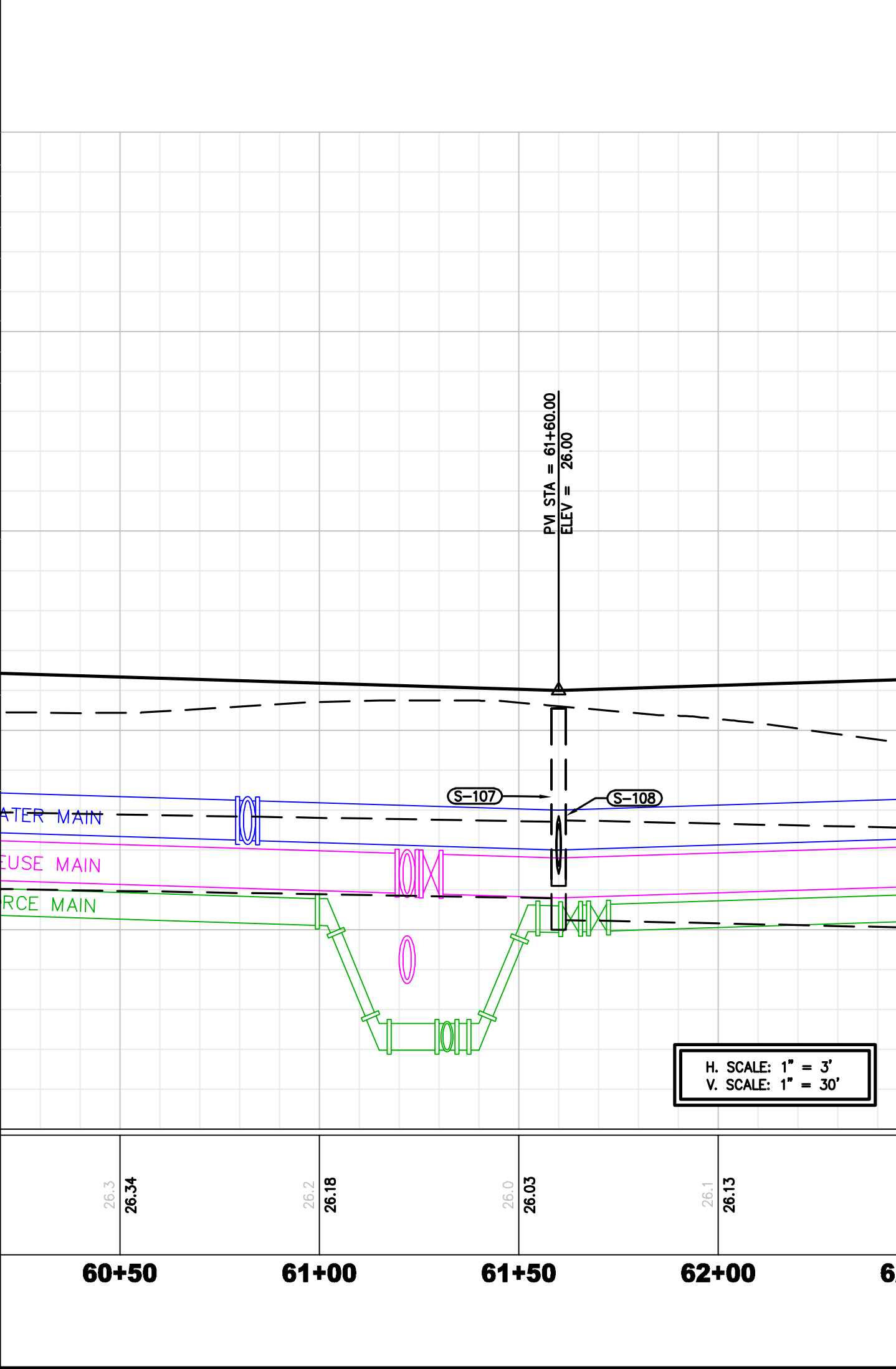
= FORCE MAIN

= WATER MAIN

= REUSE MAIN

= GRAVITY MAIN

= STORM DRAIN



PLANS PREPARED UNDER THE DIRECTION OF:

JOHN ZACHARY BRECHT
P.E. NUMBER: 66559

REVISIONS:

ETM NO. 19-239-01-055

DRAWN BY: TS

DESIGNED BY: JZB

CHECKED BY: JZB

DATE: MAY 2024

1411 Edgewater Drive, Ste. 200
Orlando, Florida 32804
(407) 536-5379
www.etmnc.com

CA-00002584 LC-0000316

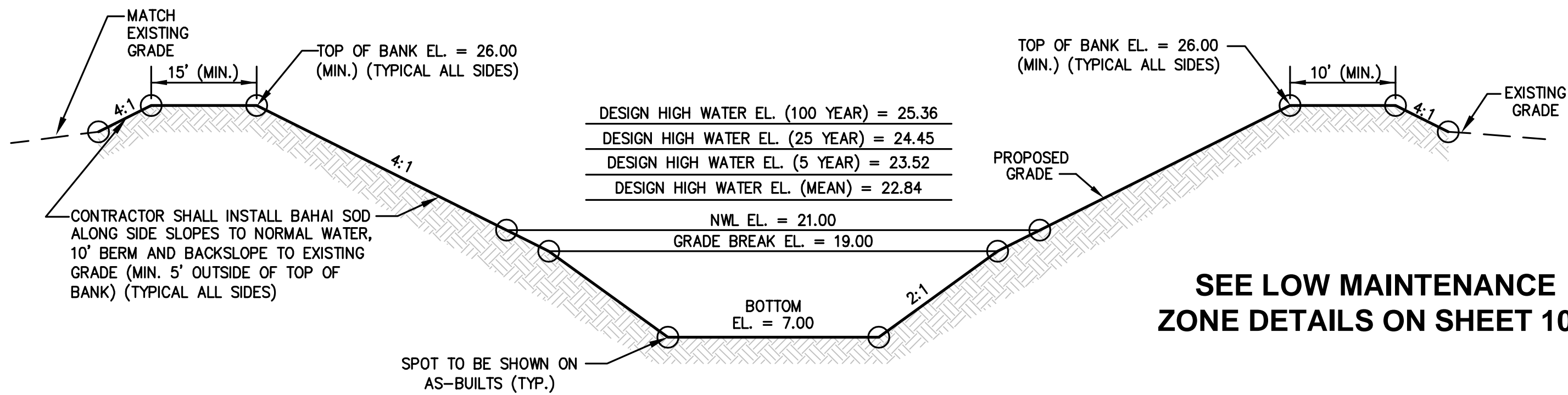
Trusted
Advisors,
Creating
Community

ETM
ENGLAND-THIMS & MILLER

UTILITY CROSS TABLE

WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

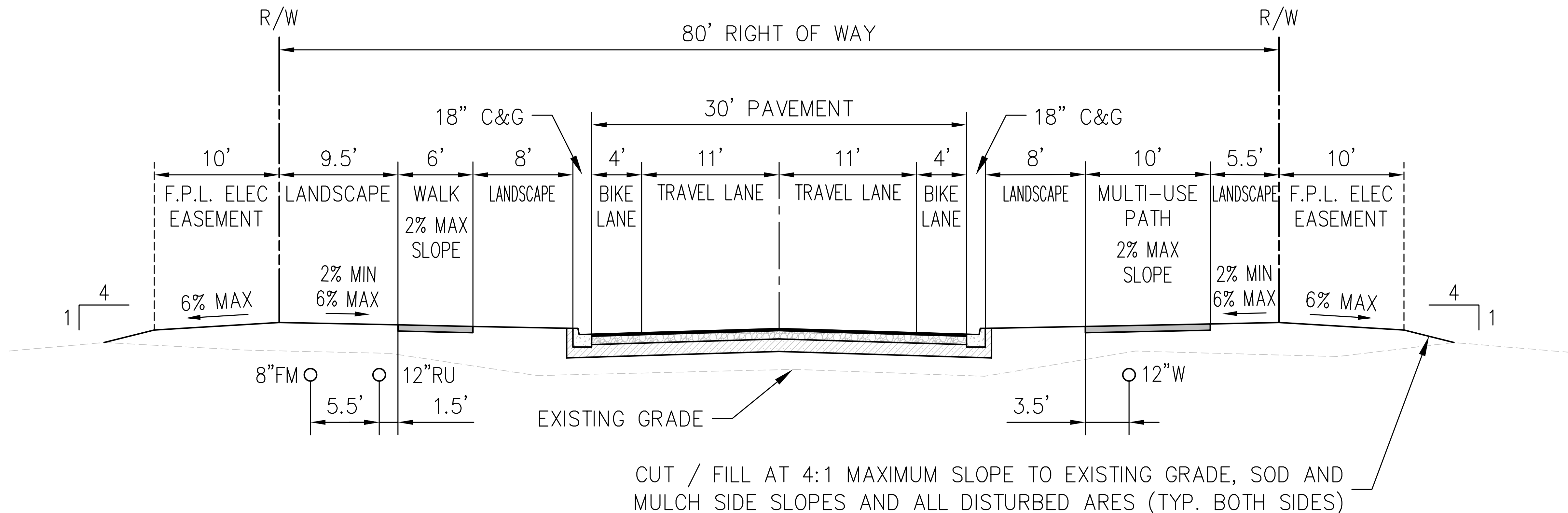
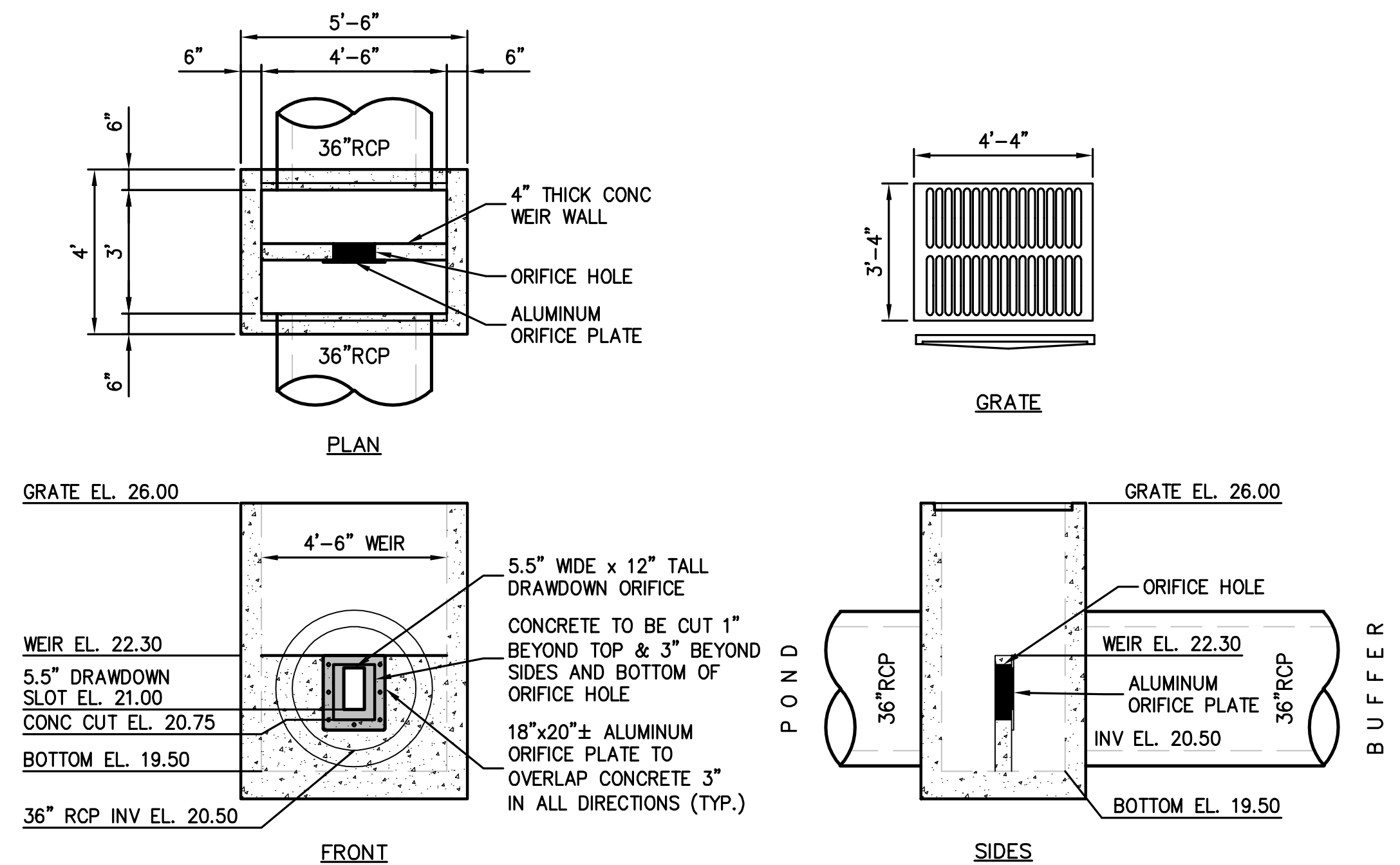
DRAWING NUMBER
9E



- NOTES:
- SIDES SLOPES SHALL NOT BE STEEPER THAN 4:1 TO DEPTH SHOWN ABOVE (PER SJRWMD REQUIREMENTS). CONTRACTOR SHALL VERIFY SLOPES AND VOLUME ON RECORD DRAWINGS AT SPOTS SHOWN ABOVE AND AT 100' MAXIMUM INTERVALS AND AT ALL TURN POINTS.
 - CONTRACTOR SHALL FILL EMBANKMENTS (BERMS) THAT ARE ABOVE EXISTING GRADE IN LIFTS NOT EXCEEDING 8" IN THICKNESS. SURFACE OF FILL SHALL BE SCARIFIED BETWEEN SUCCESSIVE LIFTS TO PROVIDE BOND AND PRECLUDE SEEPAGE PATHS OR SLICK INTERFACES. FILL SOILS SHALL CONSIST OF CLAYEY FINE SANDS (SC) WITH A MIN. 15 PERCENT OF FINES PASSING THE NO. 200 SIEVE. EMBANKMENT SHALL BE COMPACTED TO 98% OF MODIFIED PROCTOR MAX. DRY DENSITY, WITH 2%± OF OPTIMUM MOISTURE CONTENT. CONTRACTOR SHALL PROVIDE DENSITY TEST ALONG POND EMBANKMENTS AT 200' INTERVALS.
 - CONTRACTOR MAY DISPOSE OF UNSUITABLE MATERIAL IN BOTTOM OF STORM WATER MANAGEMENT FACILITY PROVIDED THAT ALL UNSUITABLE MATERIAL DISPOSED OF IS COVERED WITH A MINIMUM OF 24" OF CLEAN FILL; HOWEVER, CONTRACTOR SHALL NOT DISPOSE OF UNSUITABLE MATERIAL IN SIDE SLOPES OR BERMS, FINAL DEPTH SHALL BE AS SHOWN ON PERMITTED CONSTRUCTION PLANS.
 - NO MOWED OR CUT VEGETATIVE MATERIAL SHALL BE DEPOSITED OR REMAIN IN THE LOW MAINTENANCE ZONE OR DEPOSITED IN THE WATER. CARE SHOULD BE TAKEN TO PREVENT THE OVER-SPRAY OF AQUATIC WEED PRODUCTS INTO THE LOW MAINTENANCE ZONE.
 - REFER TO SHEET 9C FOR CORRESPONDING PROPOSED STORMWATER MANAGEMENT FACILITY ELEVATIONS.

TYPICAL SECTION THRU STORM WATER MANAGEMENT FACILITY

N.T.S.



TYPICAL CROSS-SECTION FOR 30' STREETS WITH 80' RIGHT-OF-WAY

N.T.S.

PAVING AND DRAINAGE DETAILS

WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
10A

Trusted
Advisors,
Creating
Community

ETM
ENGLAND-THIMS & MILLER

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com

REG-00002584 LC-0000316

ETM NO. 19-239-01-055

DRAWN BY: TS

DESIGNED BY: JZB

CHECKED BY: JZB

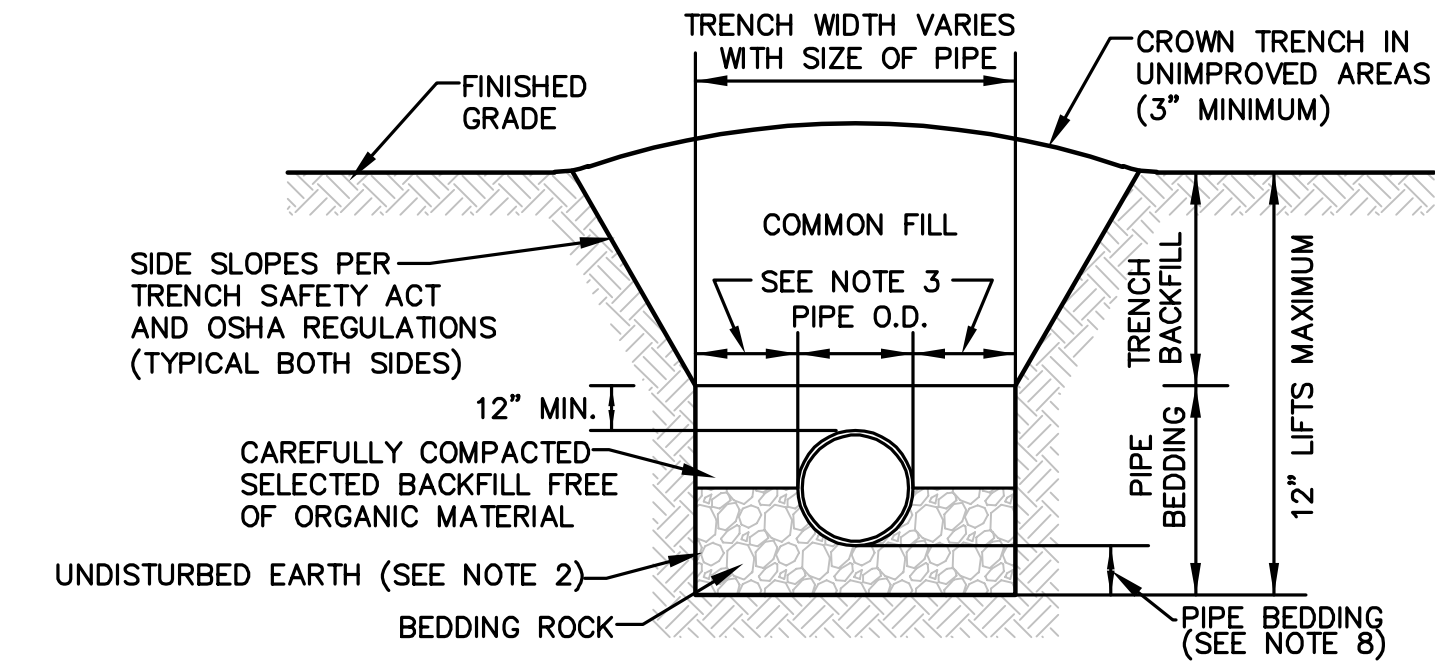
DATE: MAY 2024

REVISIONS:

PLANS PREPARED UNDER
THE DIRECTION OF:

JOHN ZACHARY BRECHT
P.E. NUMBER: 66559

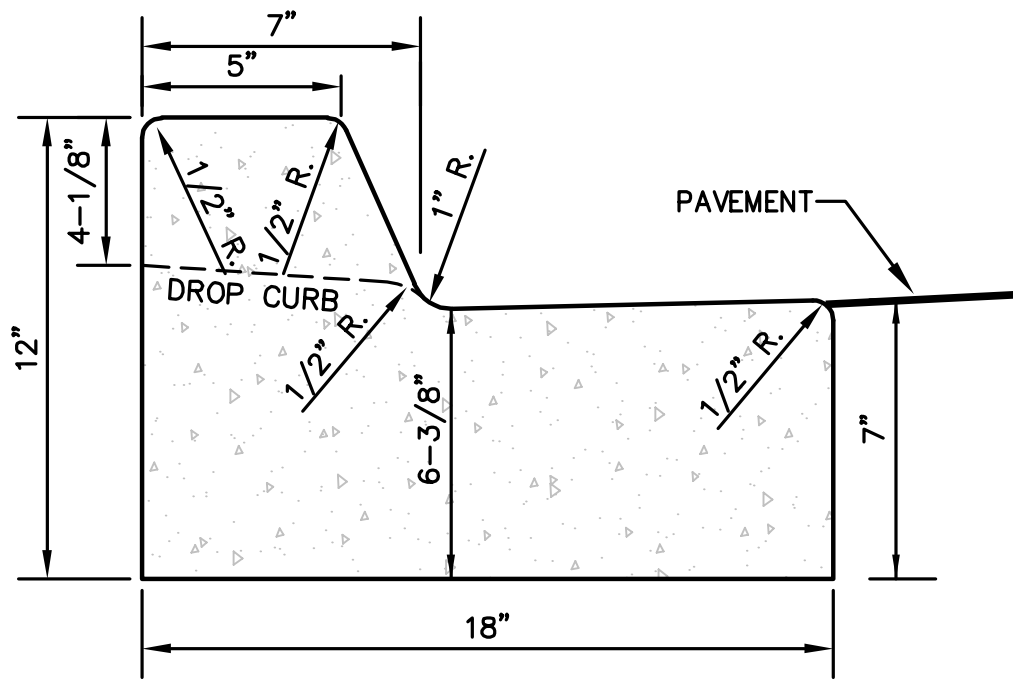
PLOTTED: June 28, 2024 - 9:07 AM, BY: Anthony Dornes



- NOTES:**
1. TRENCH AND PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% MAX. DENSITY (AASHTO T-180).
 2. USE TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE COUNTY.
 3. 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
 4. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 5. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
 6. REFER TO MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
 7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES SURFACE RESTORATION WITHIN COUNTY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.
 8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. THE COUNTY SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.

TYPE A BEDDING AND TRENCH DETAIL

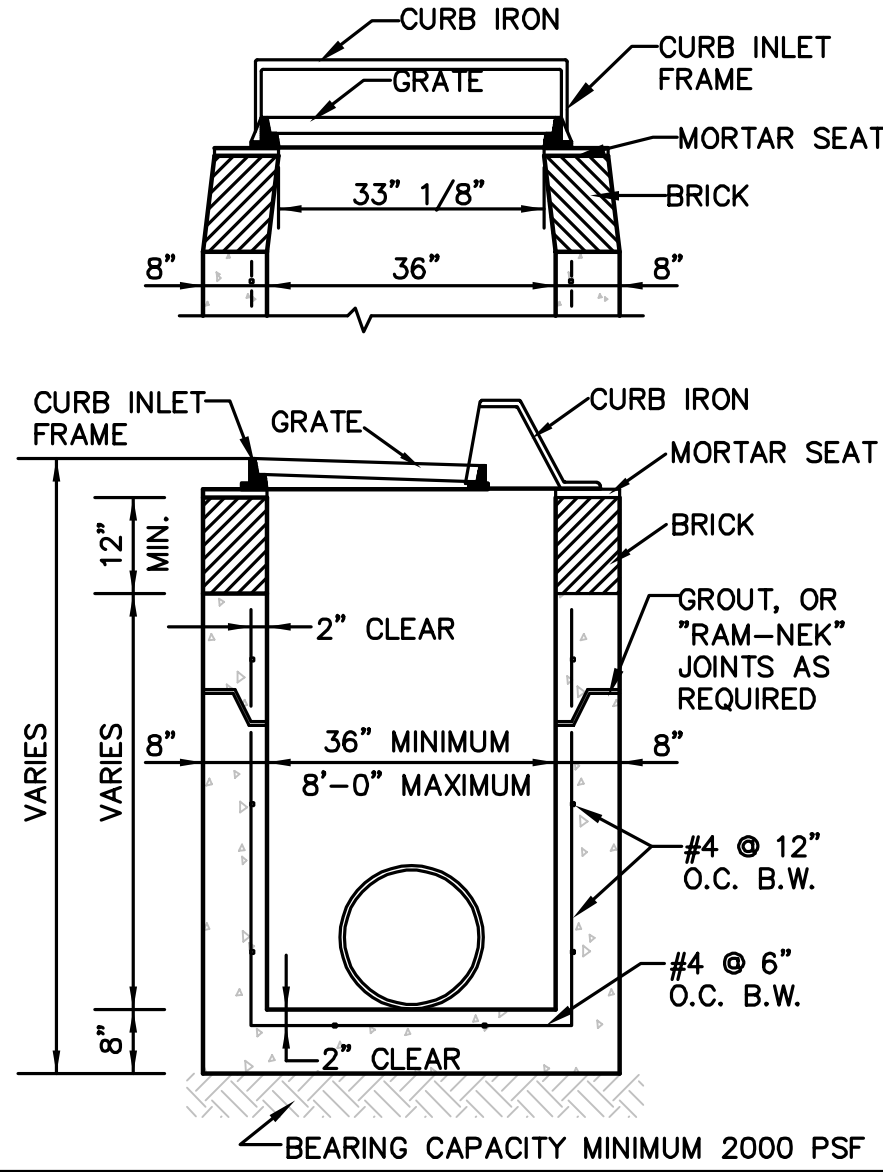
N.T.S.



STANDARD CURB AND GUTTER

N.T.S.

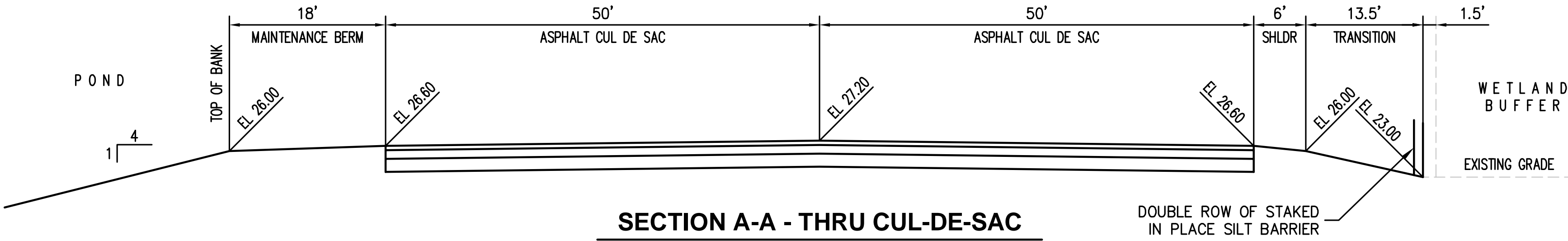
- CURB AND CURB & GUTTER NOTES:**
1. MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE LATEST FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
 2. CONCRETE SHALL BE CLASS 1 CONCRETE WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI UNLESS OTHERWISE APPROVED BY THE ENGINEER OF RECORD.
 3. WHEN USED ON THE HIGH SIDE OF ROADWAY SECTIONS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT. WHERE THIS CONDITION IS ENCOUNTERED, THE FRONT FACE VERTICAL DIMENSION SHALL REMAIN AS SHOWN FOR NORMAL SECTIONS SHOWN HEREON.



- NOTES:**
1. PROVISION SHALL BE MADE AT THE TIME OF DRAINAGE STRUCTURE PRE- CASTING TO PROVIDE OPENINGS FOR UNDERDRAIN STUBOUTS ON EACH SIDE OF INLET.
 2. CONCRETE DESIGN STRENGTH 4,000 PSI.
 3. PIPE SHALL NOT BE IN CONSTRUCTION JOINT.

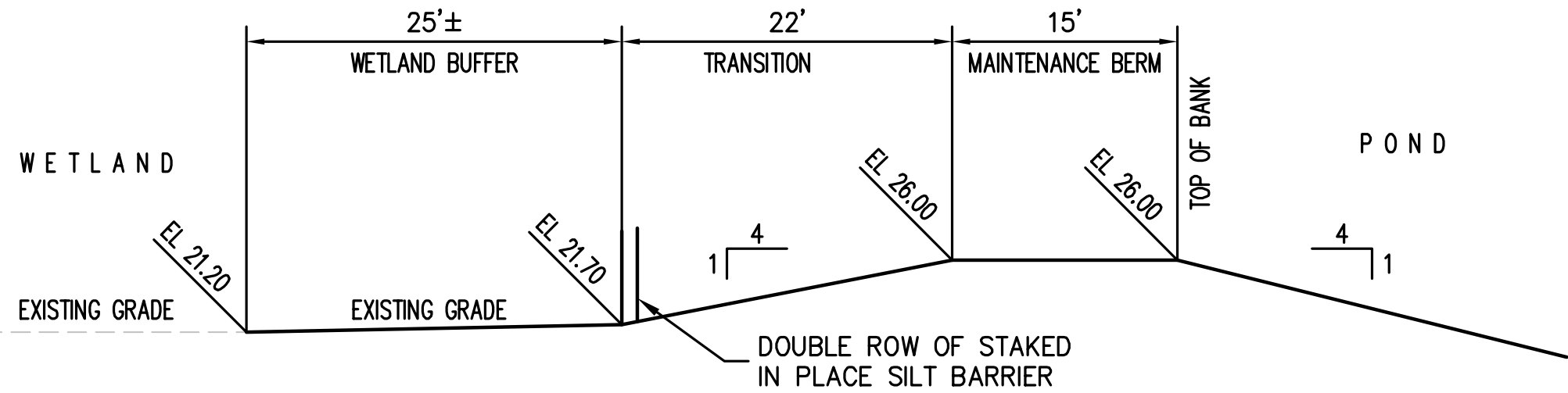
TYPE "A" SINGLE CURB INLET

N.T.S.



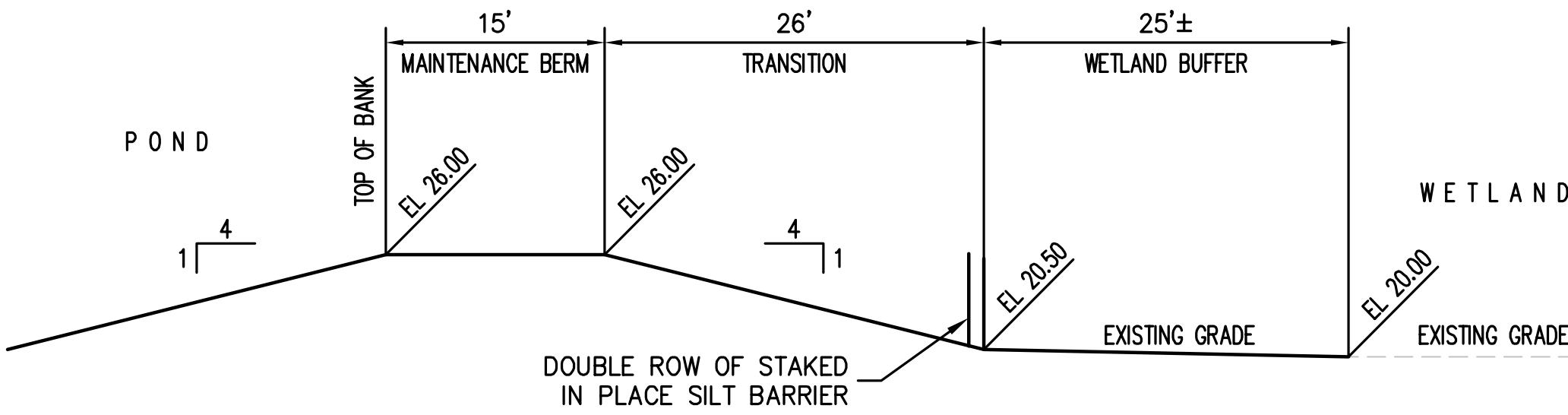
SECTION A-A - THRU CUL-DE-SAC

N.T.S.



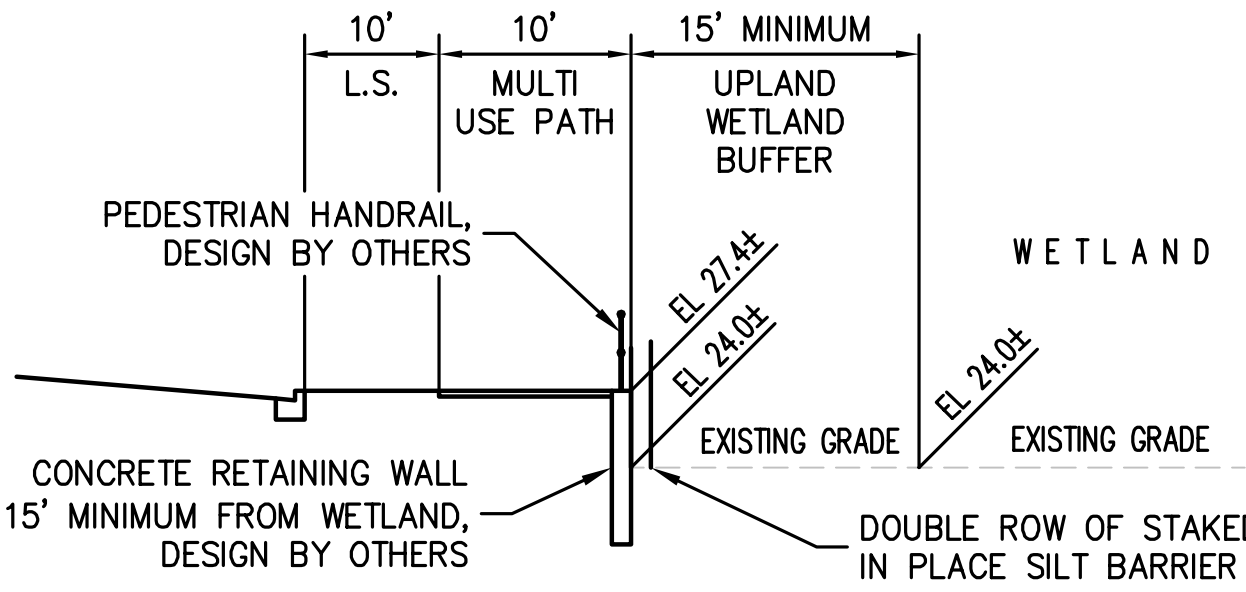
SECTION B-B - THRU POND BANK

N.T.S.



SECTION C-C - THRU POND BANK

N.T.S.



SECTION D-D - RETAINING WALL

N.T.S.

PAVING AND DRAINAGE DETAILS

**WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES**

DRAWING NUMBER
10B

PLANS PREPARED UNDER
THE DIRECTION OF:

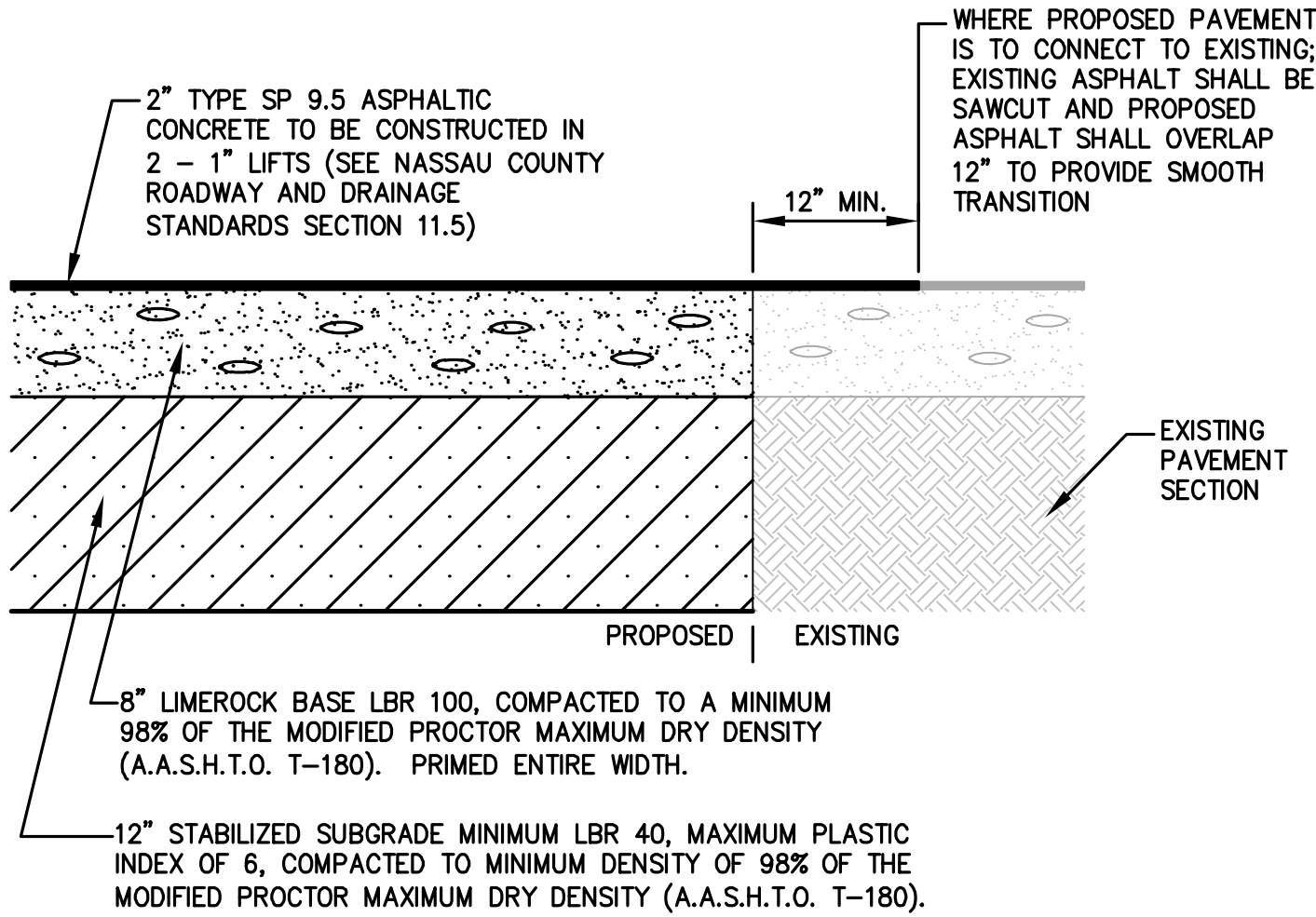
REVISIONS:

ETM NO. 19-239-01-055	DRAWN BY: TS	DESIGNED BY: JZB	CHECKED BY: JZB	DATE: MAY 2024
-----------------------	--------------	------------------	-----------------	----------------

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com
REG-00002584 LC-0000316

**Trusted
Advisors,
Creating
Community**

ETM
ENGLAND-THIMS & MILLER



SEE TYPICAL ROADWAY SECTION (SHEET 10A) FOR EXTENTS OF SUBGRADE PAST EDGE OF ASPHALT

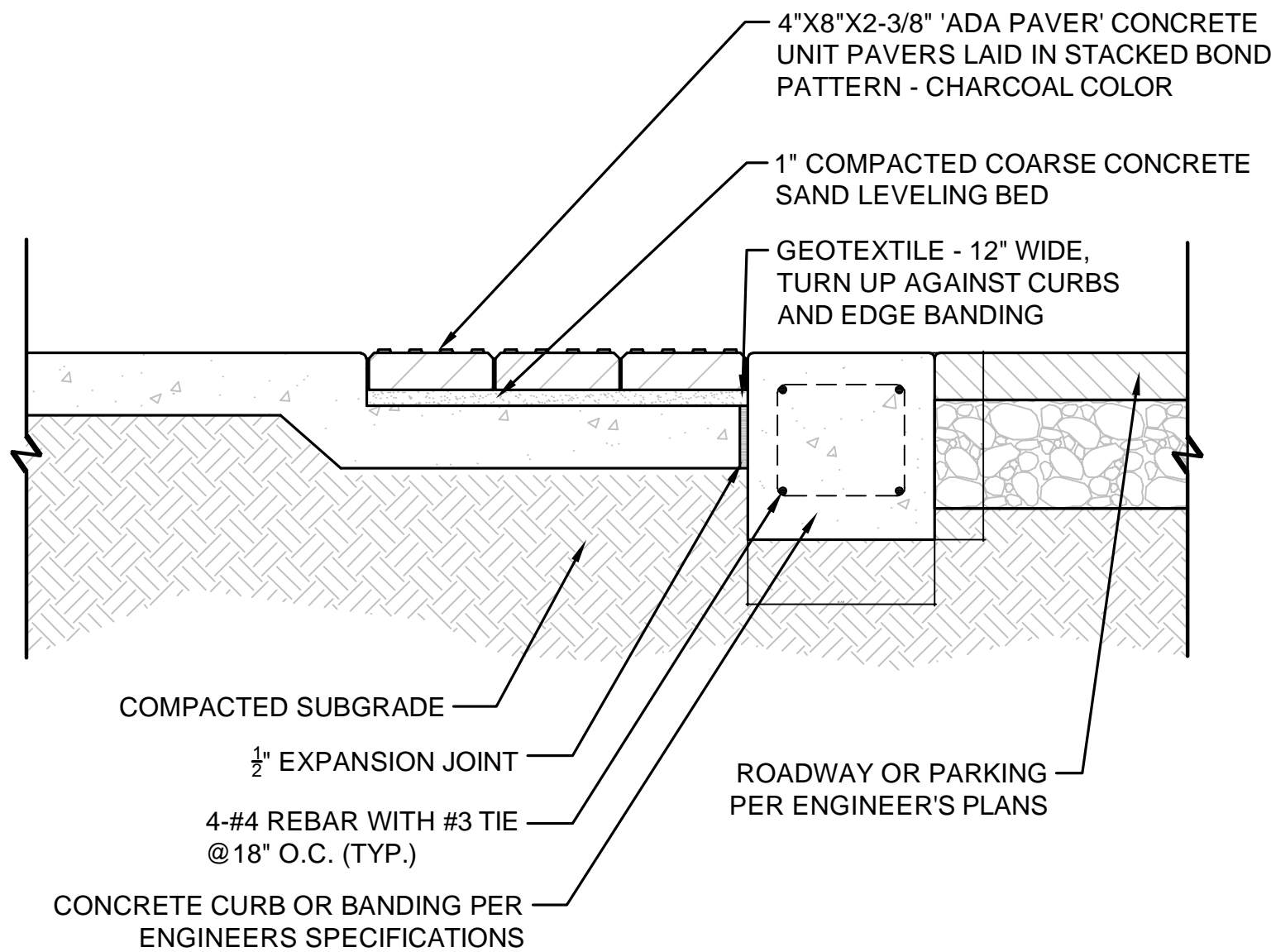
NOTES:

1. ALL DISTURBED AREAS SHALL BE DRESSED PER NASSAU COUNTY STANDARDS (SEE NASSAU COUNTY DEVELOPMENT GENERAL NOTE #7 ON SHEET 3).
2. SOIL ANALYSIS MAY INDICATE THE NEED FOR THICKER BASE COURSES THAN THOSE HEREIN. THE PAVEMENT THICKNESS SHOWN HEREIN ARE NOT INTENDED TO BE ABSOLUTE, BUT ARE PRELIMINARY CRITERIA AND MAY BE MODIFIED TO ACCOMMODATE THE BEARING CAPACITY OF VARIOUS SUBGRADES.
3. ALL ASPHALTIC CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 331 AND/OR 333, F.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
4. THE ASPHALTIC CONCRETE PAVEMENT CONSTRUCTION SHALL MEET THE REQUIREMENTS SPECIFIED IN THE NASSAU COUNTY CODE OF ORDINANCES NO. 99-17.

TYPICAL PAVEMENT SECTION

N.T.S.

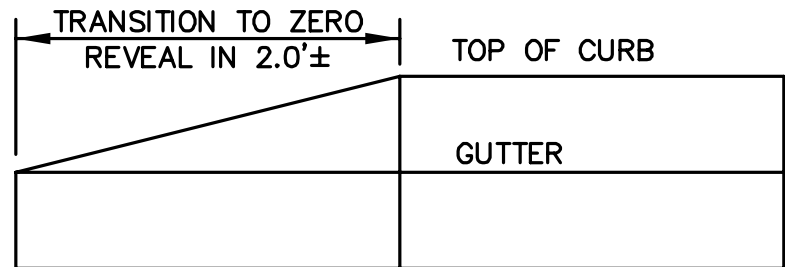
PAVERS TO BE INSTALLED PER ICPI SPECIFICATIONS



00 ADA DOME PAVERS
SHEET 1" = 1'-0"

CONCRETE JOINT DETAIL

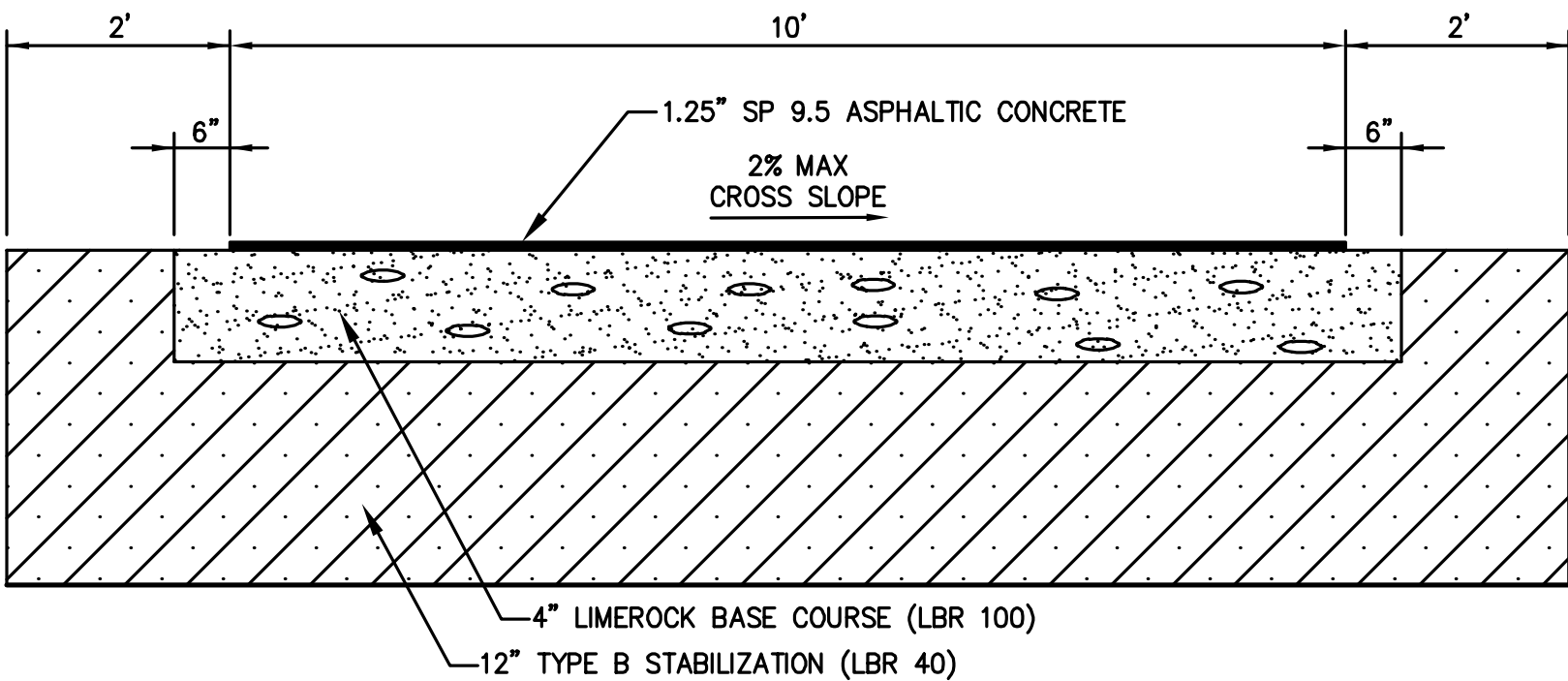
N.T.S.



SECTION

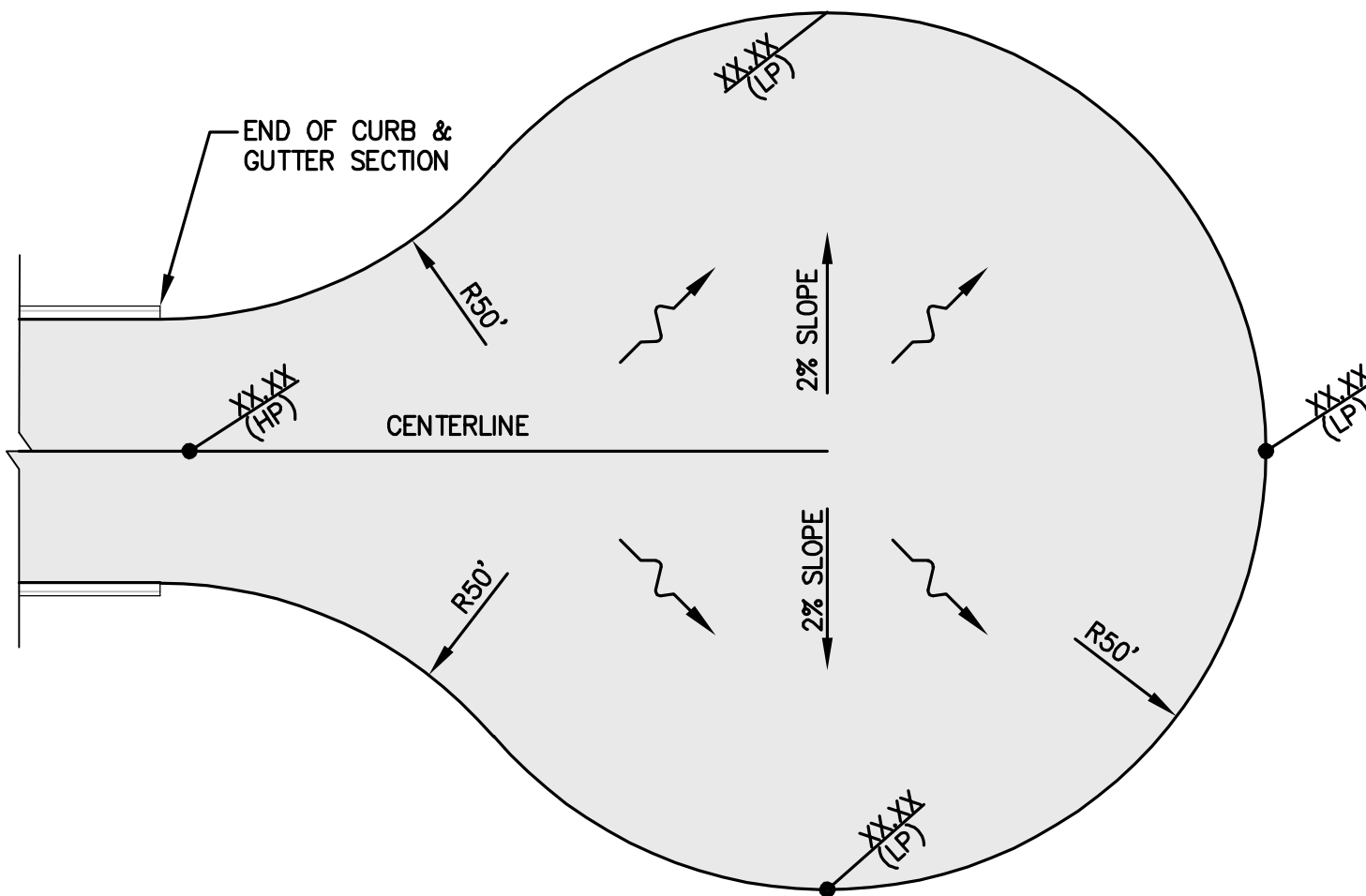
CURB TRANSITION DETAIL

N.T.S.



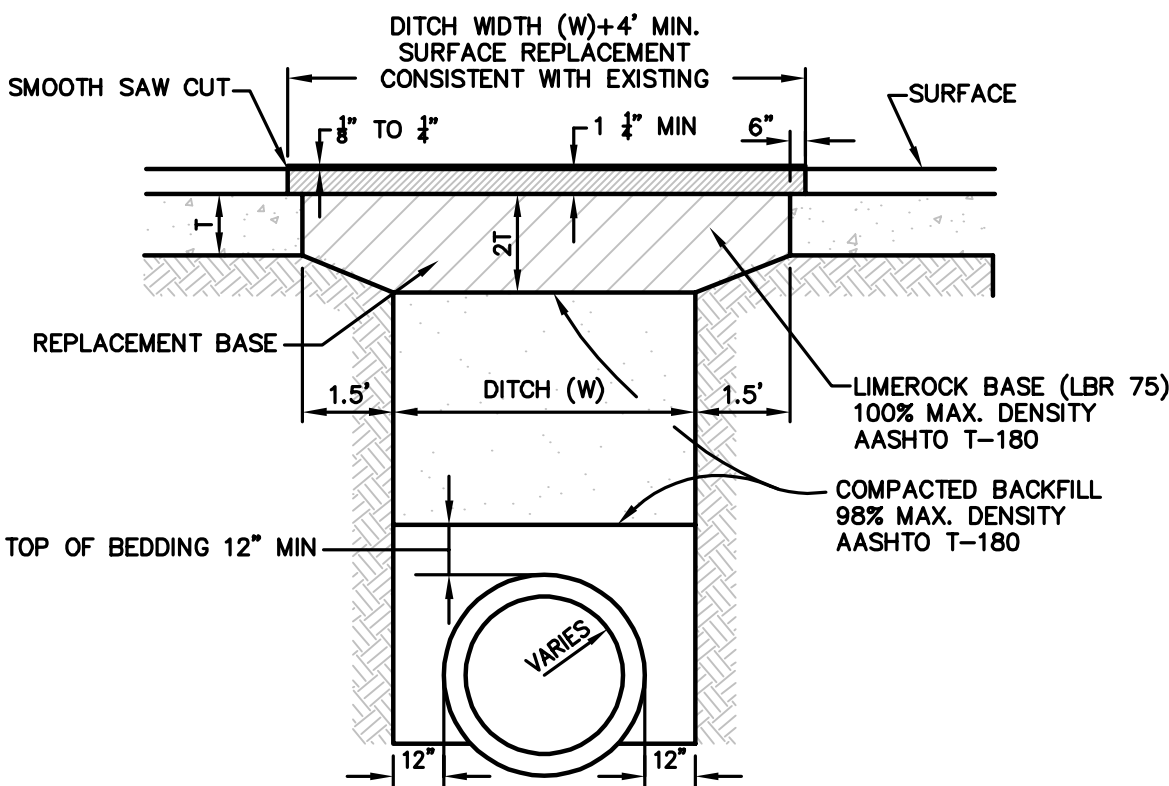
PAVEMENT SECTION - MULTI USE PATH

N.T.S.



TEMPORARY CUL-DE-SAC - PLAN VIEW

N.T.S.



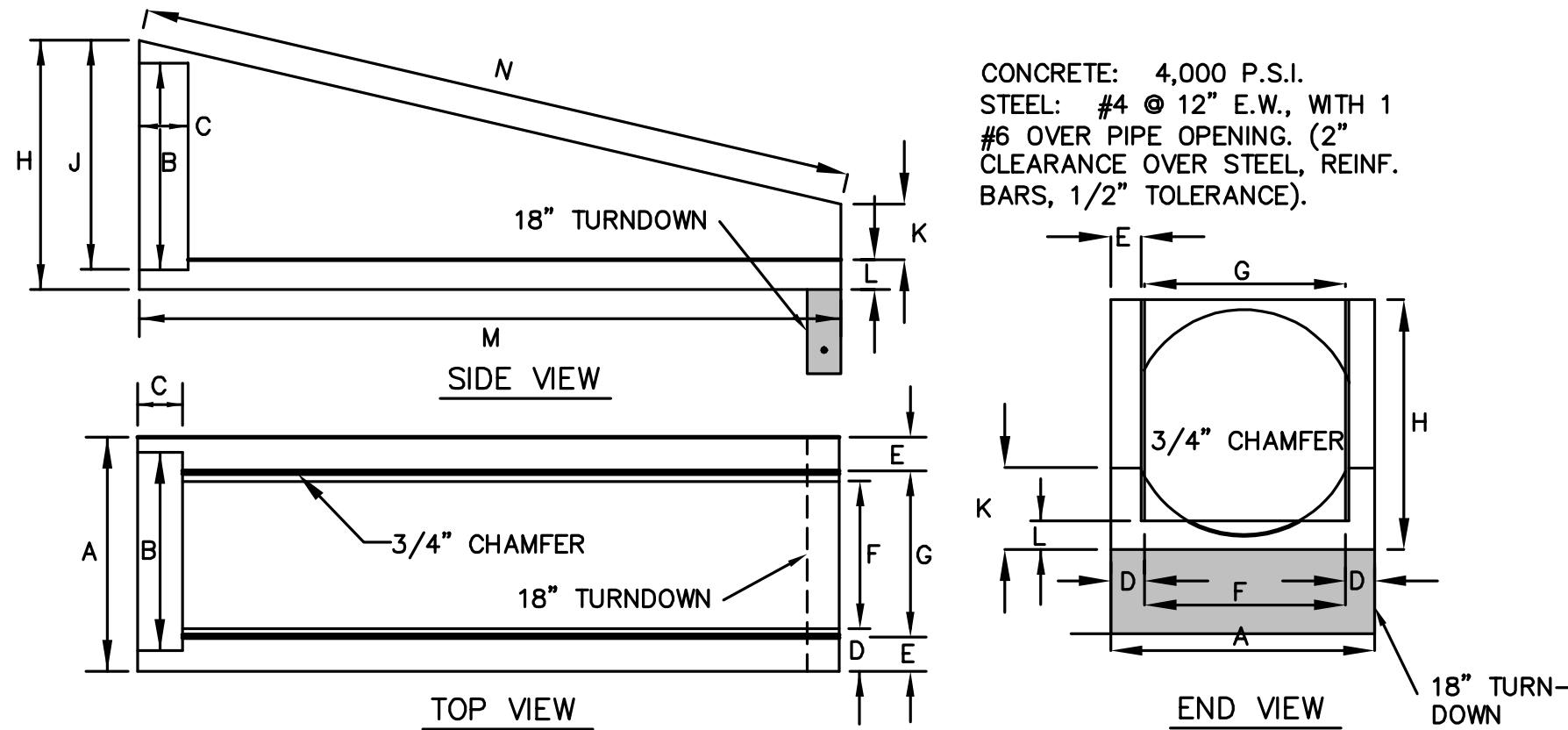
CITY STD CASE 10, P47

PERMANENT REPAIR

NOTE: IN SOME CASES PORTLAND CEMENT CONCRETE MAY BE CONSIDERED OR REQUIRED BY CITY ENGINEER FOR SURFACE REPLACEMENT.

PAVEMENT REPAIR

N.T.S.



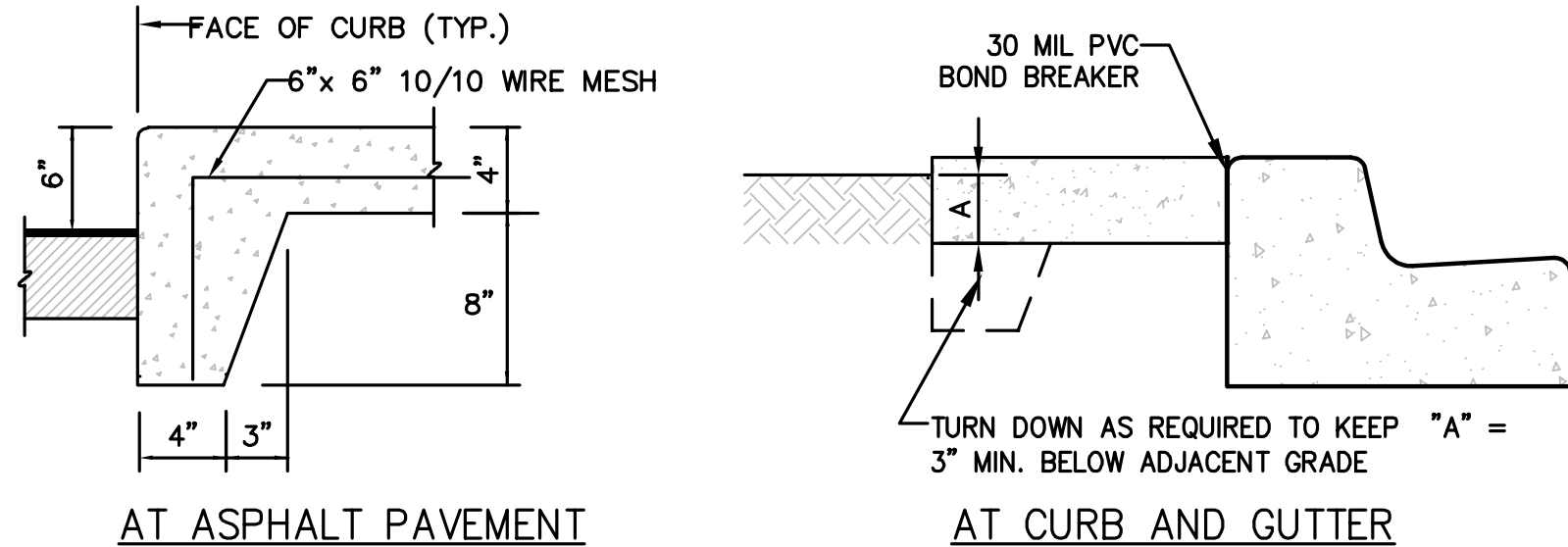
RCP/CMP	A	B	C	D	E	F	G	H	J	K	L	M	N
15" - 18"	2'-7"	2'-1"	6"	6"	6 3/4"	1'-6"	1'-7"	2'-10"	2'-4"	8"	6"	6'-10"	7'-0"
24"	2'-11"	2'-8"	6"	5"	4 1/2"	1'-11"	2'-0"	3'-6"	3'-1"	7 1/2"	5"	10'-0"	10'-3 1/2"
30"	3'-6"	3'-2"	6"	6"	5 1/2"	2'-5"	2'-6 1/2"	3'-9"	3'-5"	7"	5"	11'-5"	11'-8 1/4"
36"	4'-1"	3'-10"	6"	7"	5 1/2"	2'-9"	3'-0"	4'-6"	4'-0"	6"	6"	14'-0"	14'-4 1/2"

NOTES:

1. MITERED END SECTION SHALL MATCH SIDE SLOPE OF LAKE BANK.
2. PIPE LENGTH SHOWN ON PLANS ARE FROM BACK OF MITERED END SECTION TO CENTER OF STRUCTURE

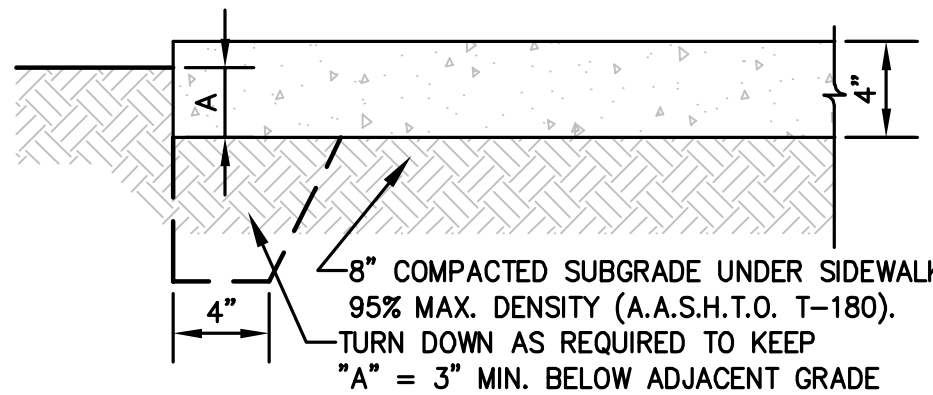
STANDARD MITERED END SECTION

N.T.S.



AT ASPHALT PAVEMENT

AT CURB AND GUTTER



AT GRADE

NOTES:

1. CONSTRUCT STRAIGHT JOINTS WITH FACE PERPENDICULAR TO SURFACE OF CONCRETE. TRAVERSE JOINTS SHALL BE AT RIGHT ANGLES TO CENTERLINE UNLESS OTHERWISE INDICATED ON PLANS.
2. PROVIDE EXPANSION JOINTS AT 100' INTERVAL MAXIMUM SPACING ON CENTER.
3. PROVIDE EXPANSION JOINTS FILLER FOR JOINTS ABUTTING CURBS, CATCH BASINS, MANHOLES, INLETS STRUCTURES, WALKS AND OTHER FIXED OBJECTS UNLESS OTHERWISE INDICATED ON PLANS.
4. EXTEND JOINTS FILLER FULL WIDTH AND DEPTH OF JOINT, AND 1/2" BELOW FINISHED SURFACE. PLACE SEALANT OVER JOINT FILLER PER MANUFACTURERS RECOMMENDATIONS.
5. USE PREMOLDED ASPHALT-IMPREGNATED FIBERBOARD, 1/2" THICK CONFORMING TO ASTM D1751.
6. CONTRACTION JOINT SHALL BE SAW CUT (1/4" WIDE BY 1" DEEP).
7. FINISHED SURFACE FOR CONCRETE SIDEWALK SHALL BE GRAY CONCRETE WITH LIGHT BROOM FINISH PERPENDICULAR TO LINE OF TRAFFIC (UNLESS OTHERWISE INDICATED ON PLANS).
8. PROVIDE CRACK CONTROL JOINTS @ (SAME AS WIDTH) O.C.
9. PROVIDE 16" STRIP SOD ADJACENT TO ALL EDGES OF SIDEWALK, CURB AND PAVEMENT AREAS.
10. CONCRETE COMPRESSION STRENGTH 3000 P.S.I. @ 28 DAYS UNLESS OTHERWISE APPROVED BY ENGINEER OF RECORD.
11. SIDEWALK TO BE CONSTRUCTED WITH SLOPES COMPLYING TO WITH LATEST ADA CODE AND FDOT INDEX 522-001. SIDEWALK MAX. VERTICAL SLOPE OF 5.0% AND MAX CROSS SLOPE OF 2.0%.

CONCRETE WALK

N.T.S.

PAVING AND DRAINAGE DETAILS

WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
10C

Trusted
Advisors,
Creating
Community.
ETM
ENGLAND-THIMS & MILLER

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258

(904) 642-8990

www.etmnc.com

REG-00002584 LC-0000316

ETM NO. 19-239-01-005

DRAWN BY: TS

DESIGNED BY: JZB

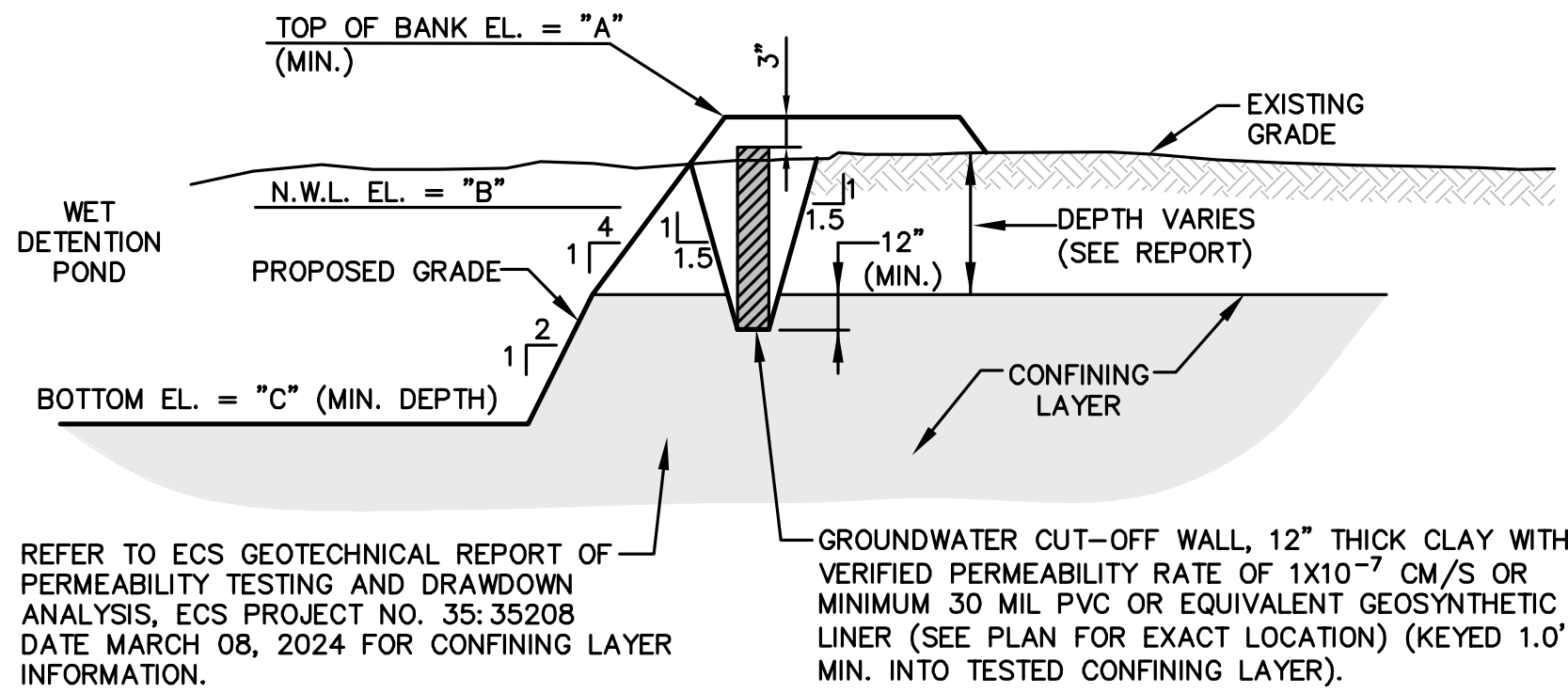
CHECKED BY: JZB

DATE: MAY 2024

PLANS PREPARED UNDER
THE DIRECTION OF:

JOHN ZACHARY BRECHT
P.E. NUMBER: 66559

PLOTTED: June 28, 2024 - 9:07 AM, BY: Anthony Dornes



REFER TO ECS GEOTECHNICAL REPORT OF PERMEABILITY TESTING AND DRAWDOWN ANALYSIS, ECS PROJECT NO. 35:35208 DATE MARCH 08, 2024 FOR CONFINING LAYER INFORMATION.

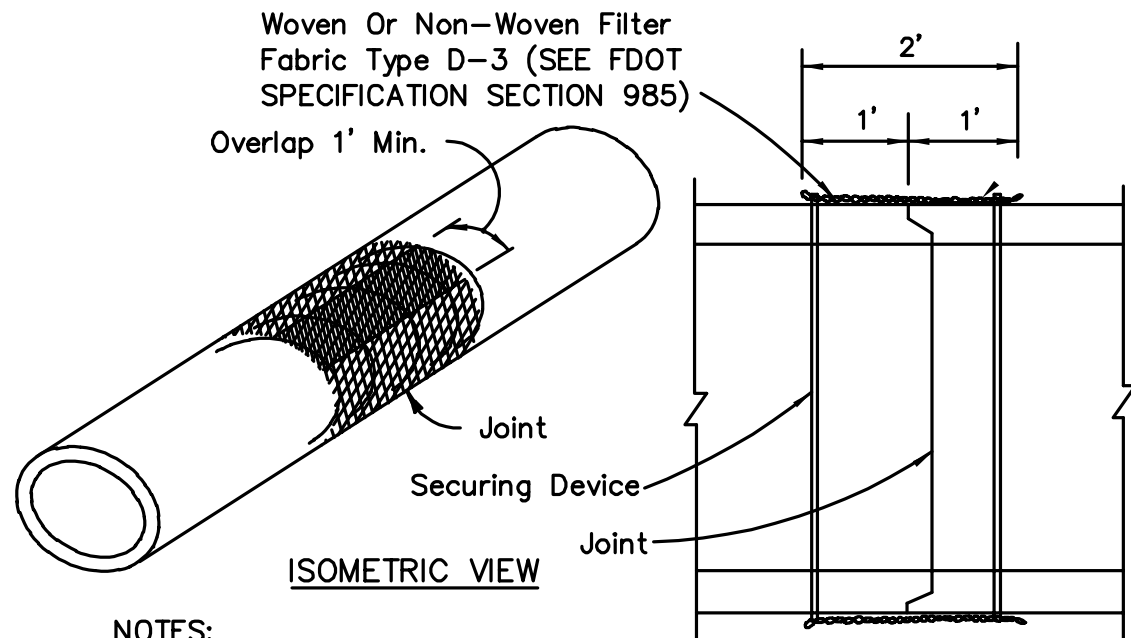
VARIABLE	DESCRIPTION	SMF-31
"A"	TOP OF BANK EL. (MIN.)	26.00
"B"	NORMAL WATER EL.	21.00
"C"	BOTTOM EL. (MIN. DEPTH)	7.00

NOTES:

- FOR CUT OFF WALL LOCATION, SEE PAVING AND DRAINAGE PLANS.
- ELEVATION OF CONFINING LAYER BASED ON FIELD EXPLORATION AT BORING LOCATION. IT SHOULD BE ANTICIPATED THAT THE CONFINING LAYER ELEVATION WILL VARY ACROSS SUBJECT SITE AND SHALL BE FIELD VERIFIED AT TIME OF CUT-OFF WALL INSTALLATION.
- GEOTECHNICAL INFORMATION AND AUGER BORINGS TAKEN FROM PROJECT GEOTECHNICAL REPORT.
- TEMPORARY DEWATERING METHODS SHOULD BE ANTICIPATED TO CONSTRUCT CUT-OFF WALL. EXCAVATION WORK WILL BE REQUIRED TO MEET OSHA REQUIREMENTS. TEMPORARY SLOPES CUT BACK AT A MIN. OF 1.5 TO 1 MAY BE USED.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL "AS-BUILT" DEPTH AND LOCATION AT 100' MAX. INTERVALS AND AT ENDS OF CUTOFF WALL.
- PERMEABILITY RATE OF CLAY SOILS MUST BE LABORATORY VERIFIED AND COMPACTION EFFORTS MUST BE FIELD VERIFIED BY DENSITY TESTING DURING CUT-OFF WALL INSTALLATION.
- THE APPLICANT MUST SUBMIT TO THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (SJRWMD) WRITTEN CERTIFICATION THE THE POND CUT-OFF WALLS ARE INSTALLED AS PER THE PLANS APPROVED BY THE SJRWMD PERMIT. THE CERTIFICATION MUST BE SIGNED, SEALED AND DATED BY A STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER AND MUST BE SUBMITTED TO THE SJRWMD WITHIN 30 DAYS OF THE COMPLETION OF THE CUT-OFF WALL OR LINER. [CHAPTER 62-330 F.A.C., PERMIT INFORMATION MANUAL SECTION 2.0].

GROUNDWATER CUT-OFF WALL DETAIL

N.T.S.

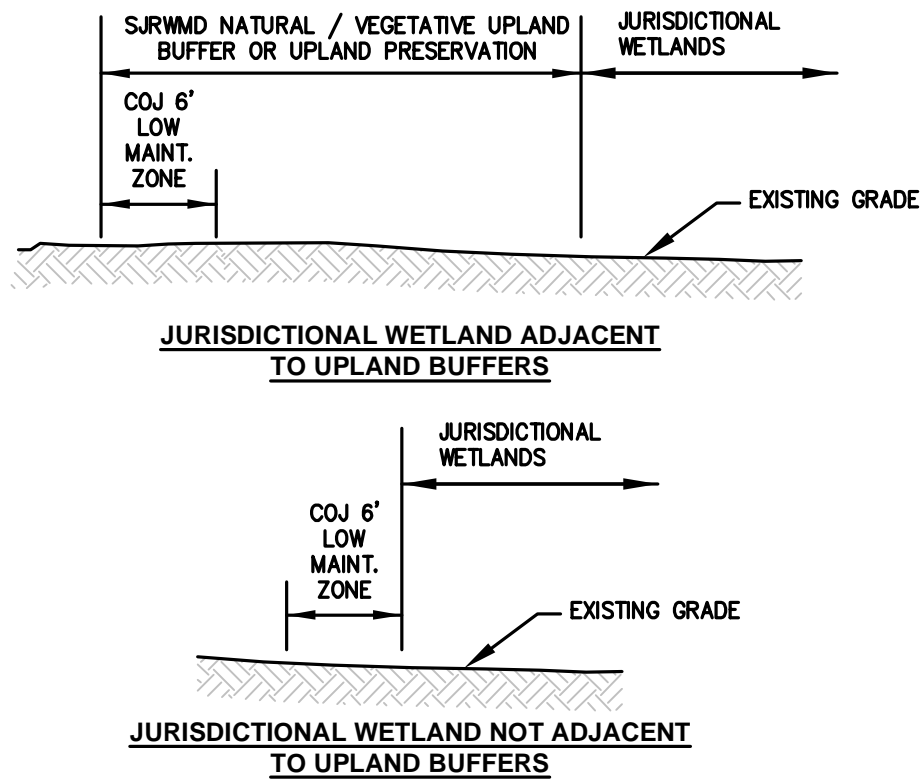


NOTES:

- ALL DRAINAGE PIPE TO BE WRAPPED AT JOINTS. PIPE SECTION
- COST OF FILTER FABRIC JACKET TO BE INCLUDED IN COST OF PIPE CULVERTS.

FILTER FABRIC JACKET

N.T.S.

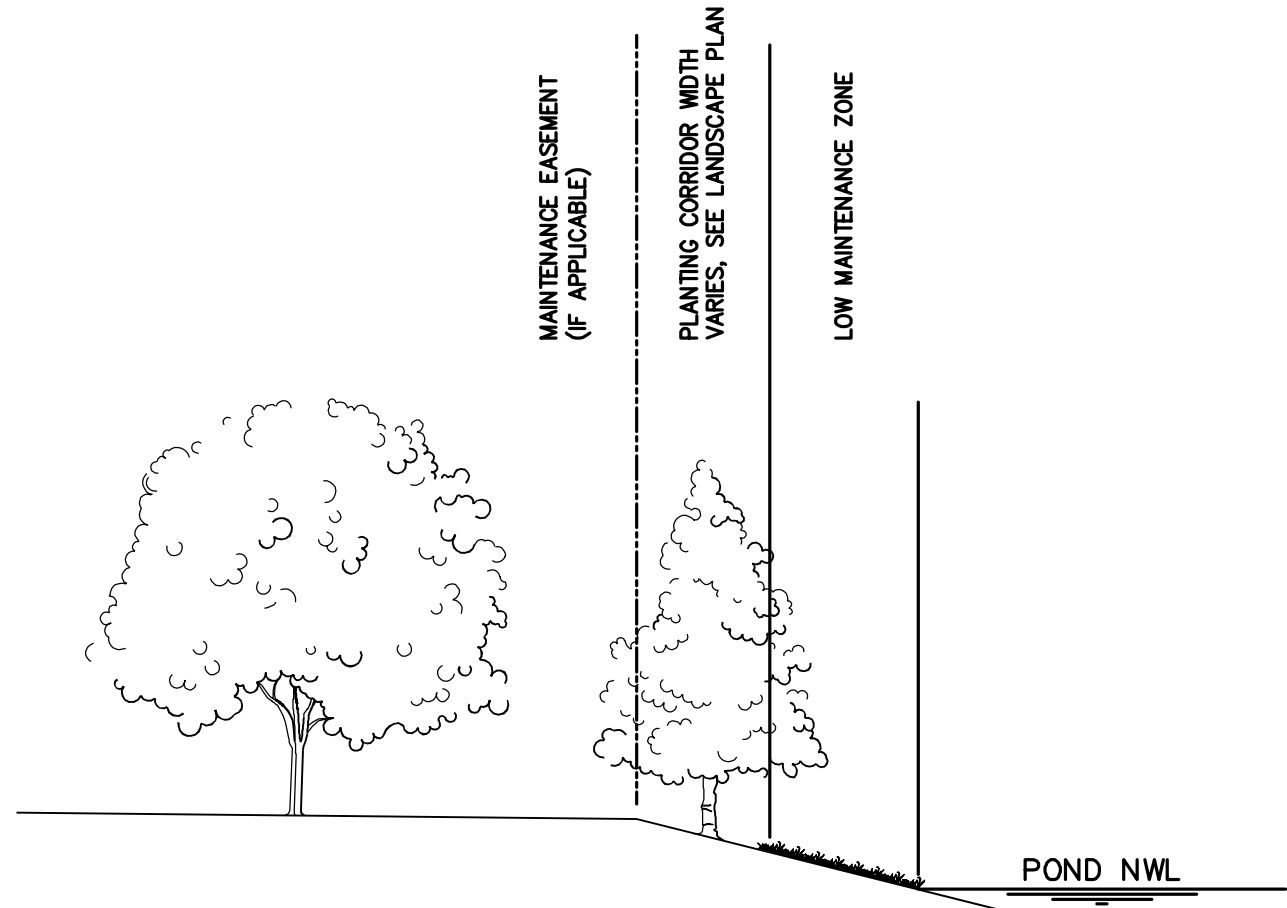


LOW MAINTENANCE ZONE NOTES (COJ ORDINANCE CH. 366, PART 6):

- SEC 366.603 - DEFINITIONS: LOW MAINTENANCE ZONE SHALL MEAN AN AREA A MINIMUM OF SIX FEET WIDE ADJACENT TO WATER COURSES WHICH IS PLANTED AND MANAGED IN ORDER TO MINIMIZE THE NEED FOR FERTILIZATION, WATERING, MOWING, ETC.
- SEC 366.607 - ...THE LOW MAINTENANCE ZONE SHALL BE A MINIMUM OF SIX FEET FROM ANY POND, STREAM, WATER COURSE, LAKE, WETLAND OR SEAWALL.
- NO MOWED OR CUT VEGETATIVE MATERIAL SHALL BE DEPOSITED OR LEFT REMAINING IN THE LOW MAINTENANCE ZONE OR DEPOSITED IN THE WATER.
- CARE SHOULD BE TAKEN TO PREVENT THE OVER-SPRAY OF AQUATIC WEED PRODUCTS INTO THE LOW MAINTENANCE ZONE

TYPICAL LOW MAINTENANCE ZONE
ADJACENT TO WETLANDS

N.T.S.



LOW MAINTENANCE ZONE NOTES (COJ ORDINANCE CH. 366, PART 6):

- SEC 366.603 - DEFINITIONS: LOW MAINTENANCE ZONE SHALL MEAN AN AREA A MINIMUM OF SIX FEET WIDE ADJACENT TO WATER COURSES WHICH IS PLANTED AND MANAGED IN ORDER TO MINIMIZE THE NEED FOR FERTILIZATION, WATERING, MOWING, ETC.
- SEC 366.607 - ...THE LOW MAINTENANCE ZONE SHALL BE A MINIMUM OF SIX FEET FROM ANY POND, STREAM, WATER COURSE, LAKE, WETLAND OR SEAWALL.
- NO MOWED OR CUT VEGETATIVE MATERIAL SHALL BE DEPOSITED OR LEFT REMAINING IN THE LOW MAINTENANCE ZONE OR DEPOSITED IN THE WATER.
- CARE SHOULD BE TAKEN TO PREVENT THE OVER-SPRAY OF AQUATIC WEED PRODUCTS INTO THE LOW MAINTENANCE ZONE

POND LOW MAINTENANCE ZONE (TYP.)

N.T.S.

PAVING AND DRAINAGE DETAILS

WILDLIGHT AVENUE PHASE 4

FOR
RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
10D

REVISIONS:

ETM NO. 19-239-01-055	DRAWN BY: TS	DESIGNED BY: JZB	CHECKED BY: JZB	DATE: MAY 2024
-----------------------	--------------	------------------	-----------------	----------------

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8900
www.etmnc.com
REG-00002584 LC-0000316

Trusted
Advisors,
Creating
Community.

ETM
ENGLAND-THIMS & MILLER

PLANS PREPARED UNDER
THE DIRECTION OF:

JOHN ZACHARY BRECHT
P.E. NUMBER: 66559

PLOTTED: June 28, 2024 - 9:07 AM, BY: Anthony Dornes

I:\2019\19-239\19-239-01 - Royonier Work\19-239-01-055 Wildlight Avenue Extension\LandDev\Design\Plots\JEA-WDET-19-239-01-055.dwg

Fri Jan 28, 2024 - 09:08

Current Layout Tab - JEA WDET01

HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS

PROPOSED UTILITY												
CONFLICTING UTILITY	POTABLE WATER			WASTEWATER GRAVITY AND FORCE MAIN			RECLAIMED WATER			VACUUM SEWERS		
	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*
POTABLE WATER	3' NOTE 1	12"	3' NOTE 2	6' to 10'	12"	6' NOTE 2	3'	12"	6' NOTE 2	3' to 10'	12"	3' NOTE 2
RECLAIMED WATER	3'	12"	6' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3'	12"	6' NOTE 2	3' NOTE 1	12"	3' NOTE 2
WASTEWATER (GRAVITY AND FORCE MAIN)	6' to 10'	12"	6' NOTE 2	3' NOTE 1	12"	6"	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
VACUUM SEWERS	3' to 10'	12"	3' NOTE 2	3' NOTE 1	12"	6"	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
RIGHT OF WAYS	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A
PERMANENT STRUCTURES (SIGNS, POLES, ETC.)	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A
STORM SEWERS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
GAS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
TREES	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A
ALL OTHER UTILITIES	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2

- NOTES:
- THIS SEPARATION REQUIREMENT IS TO PROVIDE ACCESSIBILITY FOR CONSTRUCTION AND MAINTENANCE. THREE FEET OF HORIZONTAL SEPARATION IS THE MINIMUM FOR PIPES WITH THREE FEET OF COVER. FOR PIPES INSTALLED AT GREATER DEPTH, PROVIDE AN ADDITIONAL FOOT OF SEPARATION FOR EACH ADDITIONAL FOOT OF DEPTH.
 - THE MINIMUM JOINT SPACING REQUIRED FROM CROSSING FROM OTHER UTILITIES WHILE STILL MAINTAINING MINIMUM VERTICAL SEPARATION.
 - DISTANCES GIVEN ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
 - NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF SANITARY OR STORM WATER MANHOLE OR STRUCTURES.
 - WATER MAIN SHOULD CROSS ABOVE OTHER PIPES WHENEVER POSSIBLE. WHEN WATER MAIN MUST BE BELOW OTHER UTILITY PIPING, THE MINIMUM SEPARATION SHALL BE 12 INCHES.
 - REFER TO POTABLE WATER PIPING- SECTION 350, III.4.11.

SEPARATION REQUIREMENTS FOR WATER, WASTEWATER AND RECLAIMED WATER MAINS

JANUARY 2024

PLATE W-10

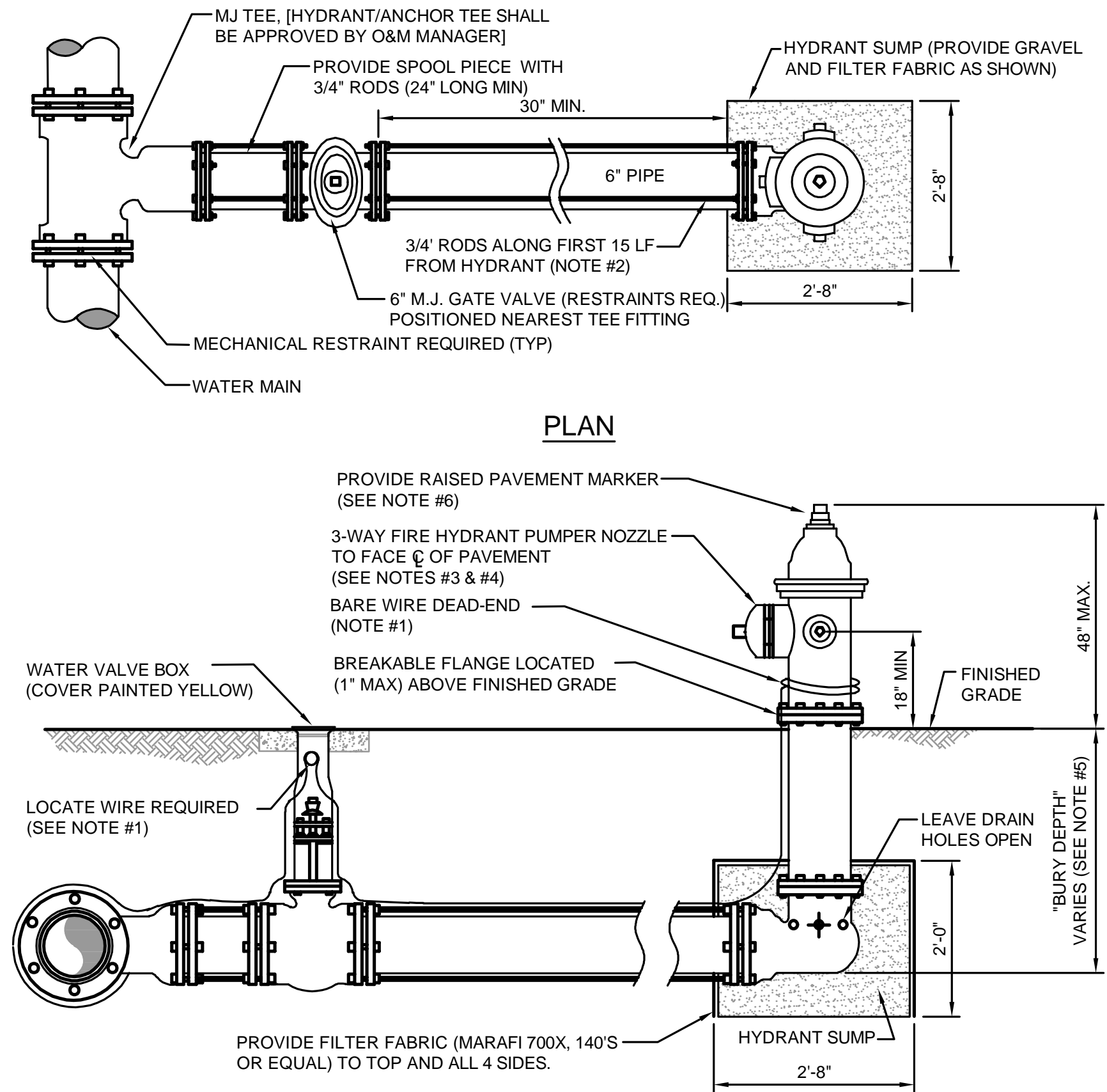
WATER MAIN AND NON-WATER MAIN SEPARATION REQUIREMENTS - NOTES

- IT IS REQUIRED THAT "WATER MAINS" BE INSTALLED, CLEANED, DISINFECTED AND HAVE A SATISFACTORY BACTERIOLOGICAL SURVEY PERFORMED IN ACCORDANCE WITH THE LATEST APPLICABLE AWWA STANDARDS, CHAPTER 62-555, F.A.C. AND LATEST JEA WATER AND SEWER STANDARDS. FOR THE PURPOSE OF THIS SECTION, THE PHRASE "WATER MAINS" SHALL MEAN MAINS, INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER, FIRE HYDRANT LEADS, AND SERVICE LINES THAT HAVE AN INSIDE DIAMETER OF THREE (3) INCHES OR GREATER. IN ADDITION, THE PHRASE "RECLAIMED WATER" REFERS TO THE WATER REGULATED UNDER PART II OF CHAPTER 62-610, F.A.C.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE (3) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS MAY BE REDUCED TO THREE (3) FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX (6) INCHES ABOVE THE TOP OF THE SEWER (SPECIAL CASE).
- NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX (6) INCHES, AND PREFERABLY TWELVE (12) INCHES, ABOVE OR AT LEAST TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS A LEAST TWELVE (12) INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- AT THE UTILITY CROSSINGS DESCRIBED IN NOTES 4 AND 5 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE (3) FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER, AND AT LEAST SIX (6) FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINE CONVEYING RECLAIMED WATER.
- NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SO THAT THE HYDRANTS ARE AT LEAST THREE (3) FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER; AT LEAST THREE (3) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER OR WASTEWATER FORCE MAIN.
- WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN THE OTHER PIPELINE, THE CONTRACTOR SHALL CONSULT THE DESIGN ENGINEER TO OBTAIN APPROVAL OF ANY ALTERNATIVE CONSTRUCTION METHODS, PRIOR TO CONSTRUCTION.

NOTES ON UTILITY SEPARATION REQUIREMENTS

JANUARY 2024

PLATE W-11



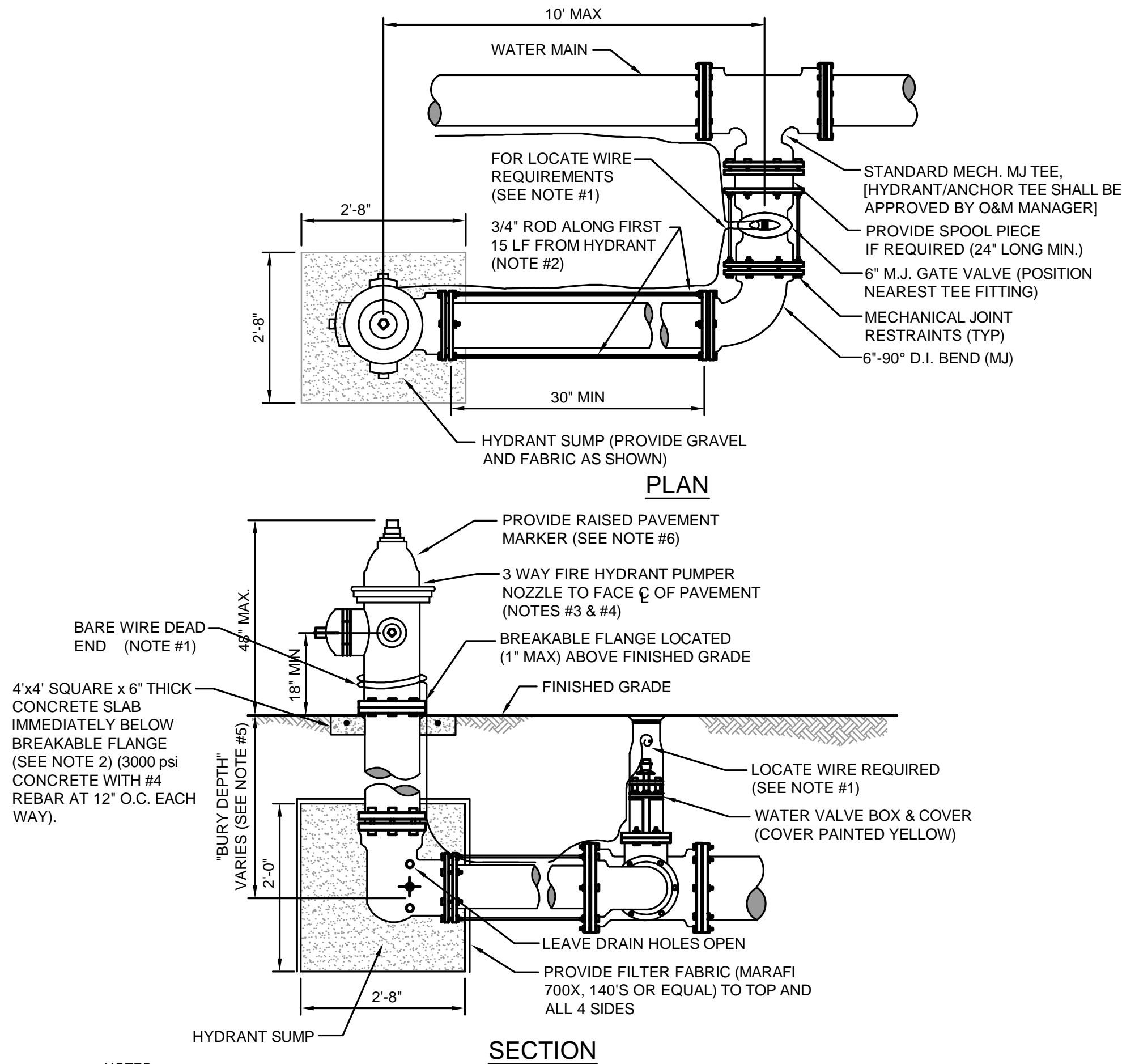
NOTES:

- LOCATE WIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE LEAVING ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAIN. SEE SECTION 350, LOCATE WIRE INSTALLATION PARAGRAPH.
- FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK AND NOT WITHIN SWALE/DITCH AREAS. THE DISTANCE RANGE FROM EDGE OF ADJACENT PAVEMENT, BACK OF CURB AND FACE OF SIDEWALK SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT RULES AND AS APPROVED BY JEA AND APPLICABLE PERMITTING AGENCIES. DISTANCE SHALL BE MEASURED TO THE CLOSEST PART OF THE FIRE HYDRANT (I.E. THE PUMPER NOZZLE). THE MAXIMUM DISTANCE (BACK OF CURB) SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT RULES AND AS APPROVED BY JEA. FOR OTHER LOCATION LIMITATIONS SEE PLATES W-10 AND W-11. IF PIPING BETWEEN TEE AND HYDRANT IS LONGER THAN 80 LF, AN ADDITIONAL 6\"/>
- NO WATER MAIN BRANCHES OR SERVICE TAPS SHALL BE ALLOWED ALONG THE HYDRANT BRANCH MAIN, UNLESS APPROVED BY JEA.
- OPERATION OF THE FIRE HYDRANT SHALL BE EITHER FULL OPEN POSITION OR TOTALLY CLOSED POSITION. THE HYDRANT SHALL NOT BE UTILIZED TO THROTTLE OUTLET FLOW.
- PRIOR TO PROJECT FINAL INSPECTION, THE HYDRANT AND ALL ABOVE GROUND PIPING SHALL BE RE-OILED, GREASED AND REPAINTED (RUS- KIL ENAMEL-INTERNATIONAL YELLOW OR EQUAL), PRIVATELY OWNED AND MAINTAINED FIRE HYDRANTS SHALL BE PAINTED RED.
- FIRE HYDRANTS SHALL BE ORDERED WITH PROPER "BURY DEPTH" TO MEET ACTUAL FIELD CONDITIONS. THIS IS ESPECIALLY IMPORTANT FOR BRANCH LINES WHICH TEE-OFF A 12\"/>
- BLUE REFLECTIVE MARKERS SHALL BE INSTALLED IN SUCH A MANNER THAT THE REFLECTIVE FACE OF THE MARKER IS PERPENDICULAR TO A LINE PARALLEL TO THE ROADWAY CENTERLINE. THE BLUE REFLECTIVE MARKERS SHALL BE PLACED IN THE CENTER OF THE TRAVEL LANE, DIRECTLY ACROSS FROM AND ADJACENT TO EACH FIRE HYDRANT.

FIRE HYDRANT INSTALLATION USING MECHANICAL JOINT TEE

JANUARY 2024

PLATE W-13



NOTES:

- LOCATE WIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE LEAVING ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAIN. SEE SECTION 350, LOCATE WIRE INSTALLATION PARAGRAPH.
- FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK. ALL HYDRANTS SHALL BE LOCATED NO LESS THAN THREE (3) FEET FROM THE EDGE OF PAVEMENT OR BACK OF CURB OF THE ADJACENT ROADWAY AND NO LESS THAN THREE (3) FEET FROM ANY PHYSICAL FEATURE WHICH MAY OBSTRUCT ACCESS OR VIEW OF ANY HYDRANT UNLESS OTHERWISE APPROVED BY THE JEA. THE MAXIMUM DISTANCE (BACK OF CURB) SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT RULES AND AS APPROVED BY JEA. FOR OTHER LOCATION LIMITATIONS SEE PLATES W-10 AND W-11. IF PIPING BETWEEN TEE AND HYDRANT IS LONGER THAN 80 LF, AN ADDITIONAL 6\"/>
- NO WATER MAIN BRANCHES OR SERVICE TAPS SHALL BE ALLOWED ALONG THE HYDRANT BRANCH MAIN, UNLESS APPROVED BY JEA.
- OPERATION OF THE FIRE HYDRANT SHALL BE EITHER FULL OPEN POSITION OR TOTALLY CLOSED POSITION. THE HYDRANT SHALL NOT BE UTILIZED TO THROTTLE OUTLET FLOW.
- PRIOR TO PROJECT FINAL INSPECTION, THE HYDRANT AND ALL ABOVE GROUND PIPING SHALL BE RE-OILED, GREASED AND REPAINTED (RUS- KIL ENAMEL-INTERNATIONAL YELLOW OR EQUAL), PRIVATELY OWNED AND MAINTAINED FIRE HYDRANTS SHALL BE PAINTED RED.
- FIRE HYDRANTS SHALL BE ORDERED WITH PROPER "BURY DEPTH" TO MEET ACTUAL FIELD CONDITIONS. THIS IS ESPECIALLY IMPORTANT FOR BRANCH LINES WHICH TEE-OFF A 12\"/>
- BLUE REFLECTIVE MARKERS SHALL BE INSTALLED IN SUCH A MANNER THAT THE REFLECTIVE FACE OF THE MARKER IS PERPENDICULAR TO A LINE PARALLEL TO THE ROADWAY CENTERLINE. THE BLUE REFLECTIVE MARKERS SHALL BE PLACED IN THE CENTER OF THE TRAVEL LANE, DIRECTLY ACROSS FROM AND ADJACENT TO EACH FIRE HYDRANT.

FIRE HYDRANT INSTALLATION LIMITED SPACE

JANUARY 2024

PLATE W-14

England, Thims & Miller, Inc.
14776 Old St. Augustine Road
Jacksonville, FL 32228
TEL: (904) 646-4444
FAX: (904) 646-9485
CA - 0000284 LC - 0000316

ETM
VISION • EXPERIENCE • RESULTS

THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE JEA. WE TAKE NO EXCEPTION TO THE DESIGN

NO.	BY	DATE	REVISIONS	
4.				
3.				
2.				
1.				

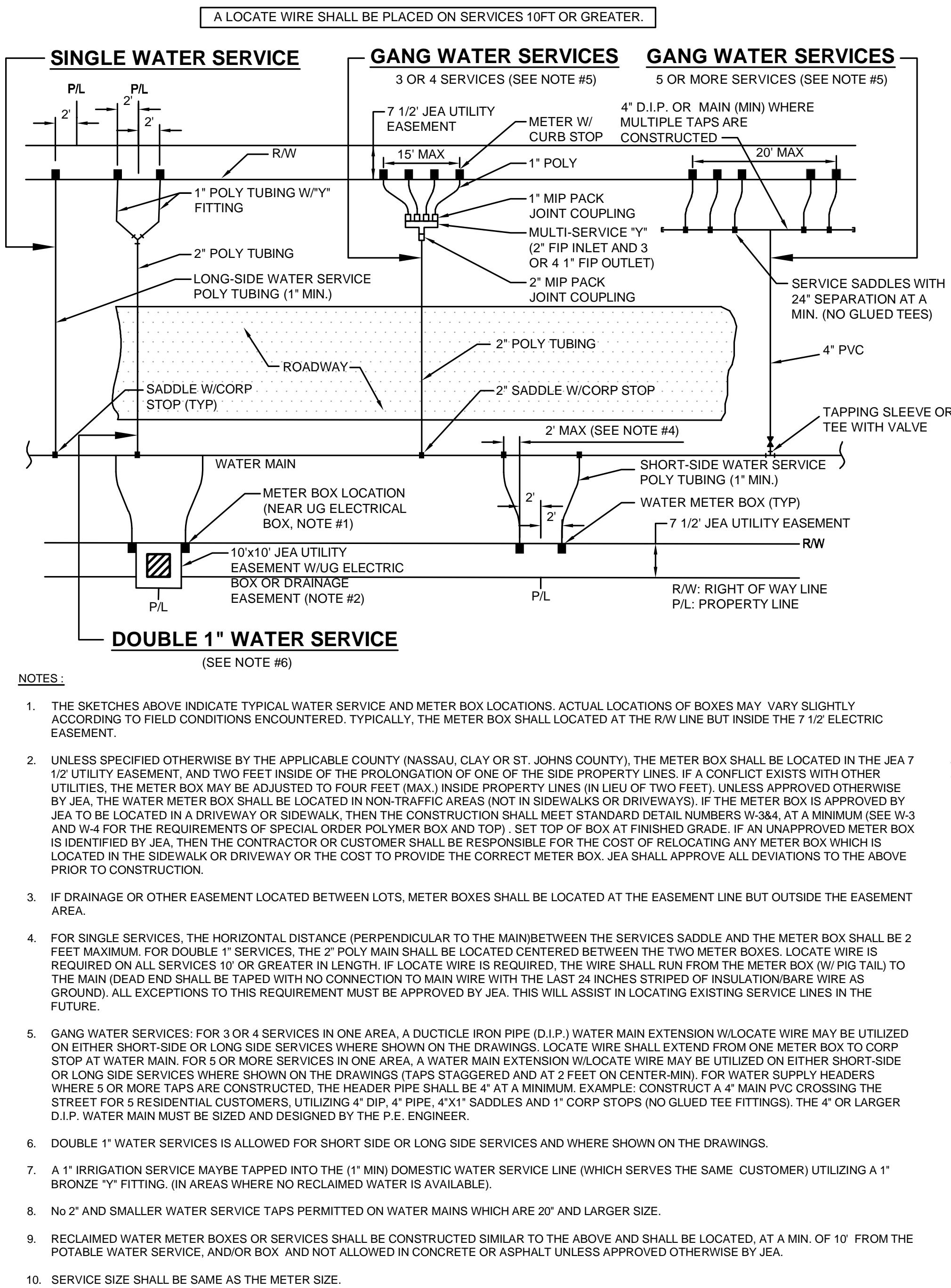
DESIGN ENGINEER
JOHN ZACHARY BRECHT
FLORIDA REGISTRATION NO.
66559

DESIGNER:
DRAWN BY:
DATE:
CHECKED BY:
DATE:

JEA
Building Community

JEA STANDARD
WATER AND RECLAIMED DETAILS
WILDLIGHT AVENUE PHASE 4

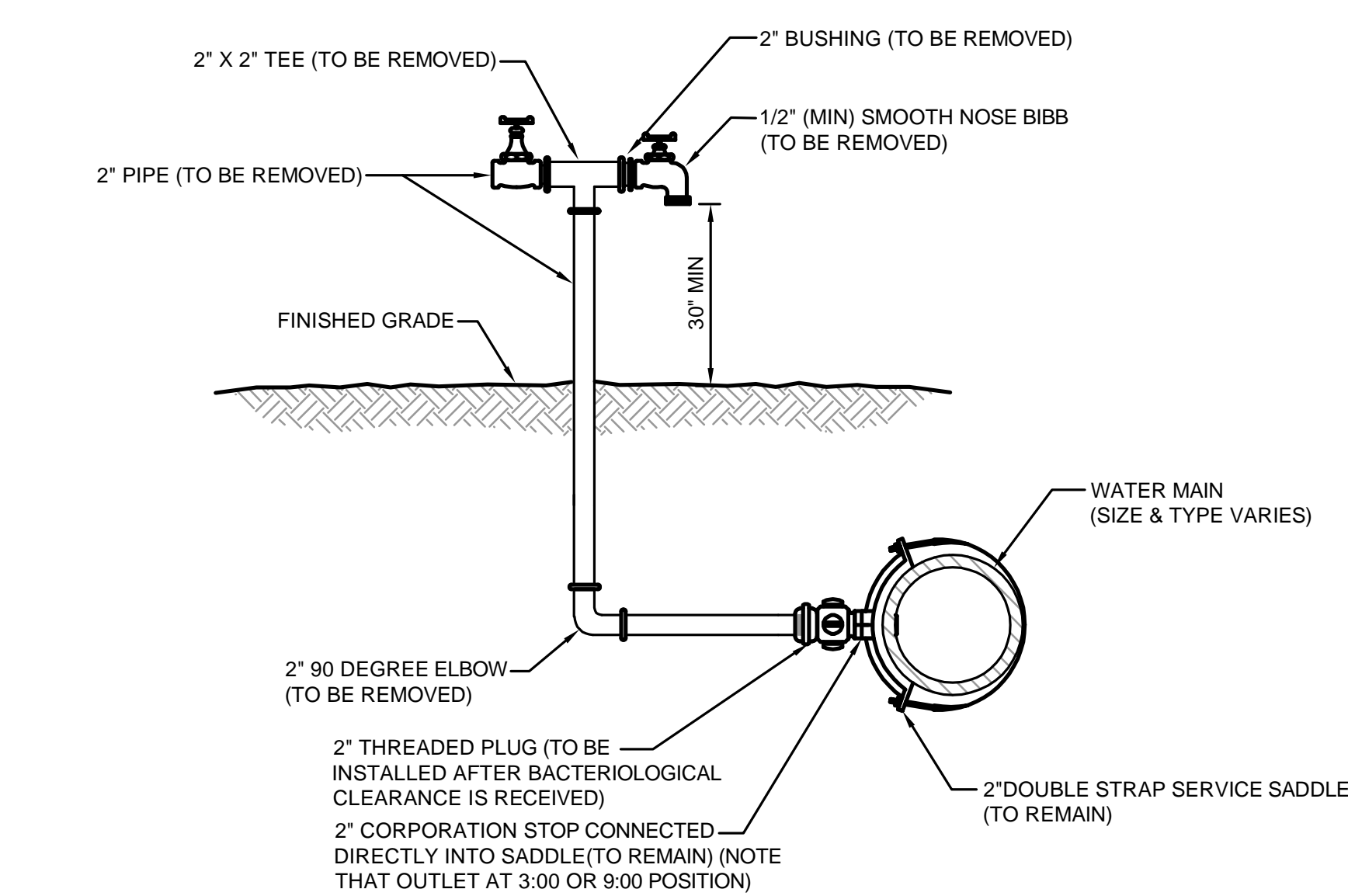
PROJ. NO. 19-239-01-055	DATE: JANUARY 2024	SCALE: AS NOTED
NO. SHEETS 5	SHEET NO. 1	DRAWING NO. 12A



WATER OR RECLAIM SERVICE INSTALLATIONS 2" AND SMALLER METER

JANUARY 2024

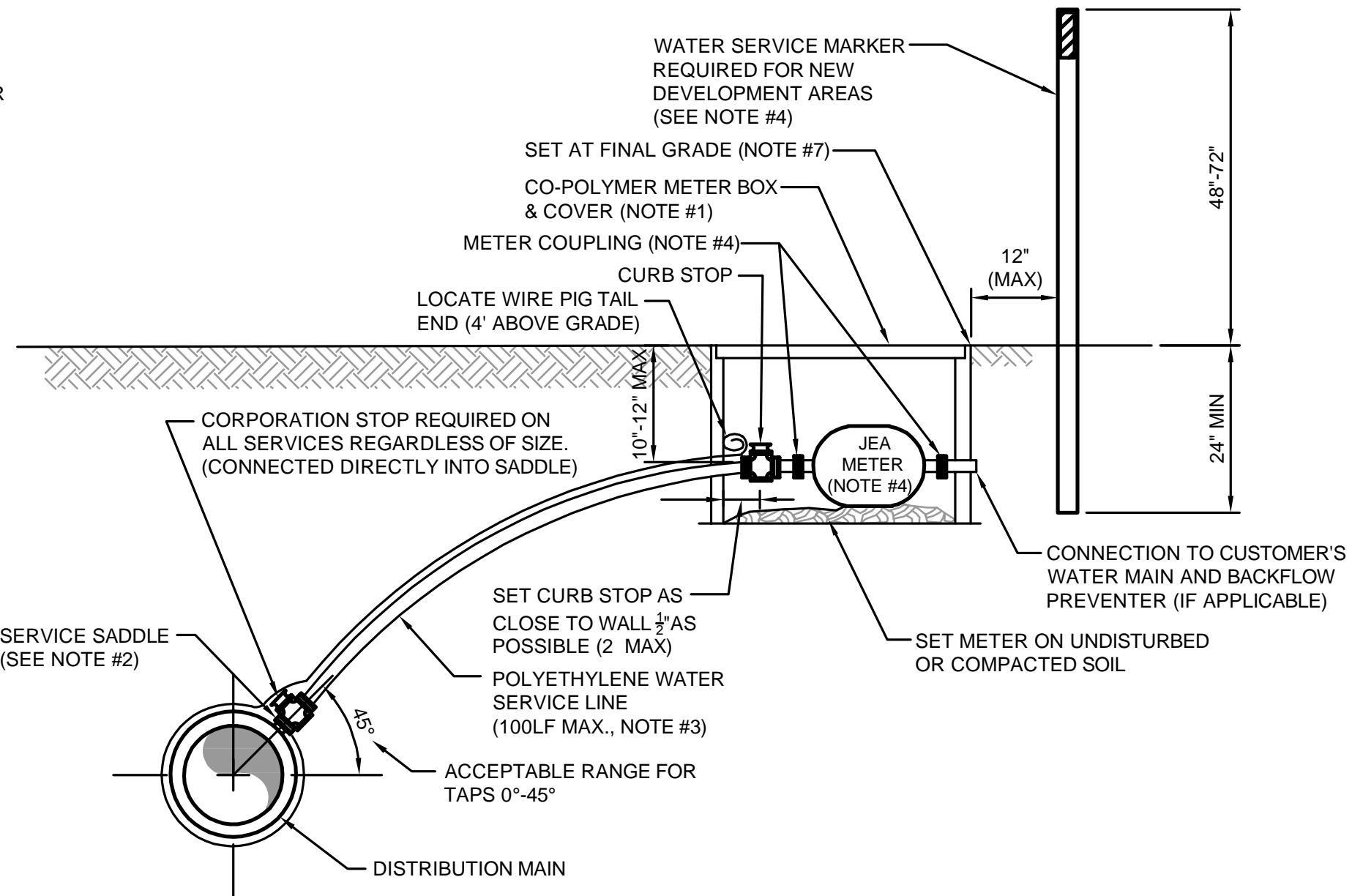
PLATE W-1



2" TEMPORARY SAMPLE TAP FOR STUB OUT

JANUARY 2024

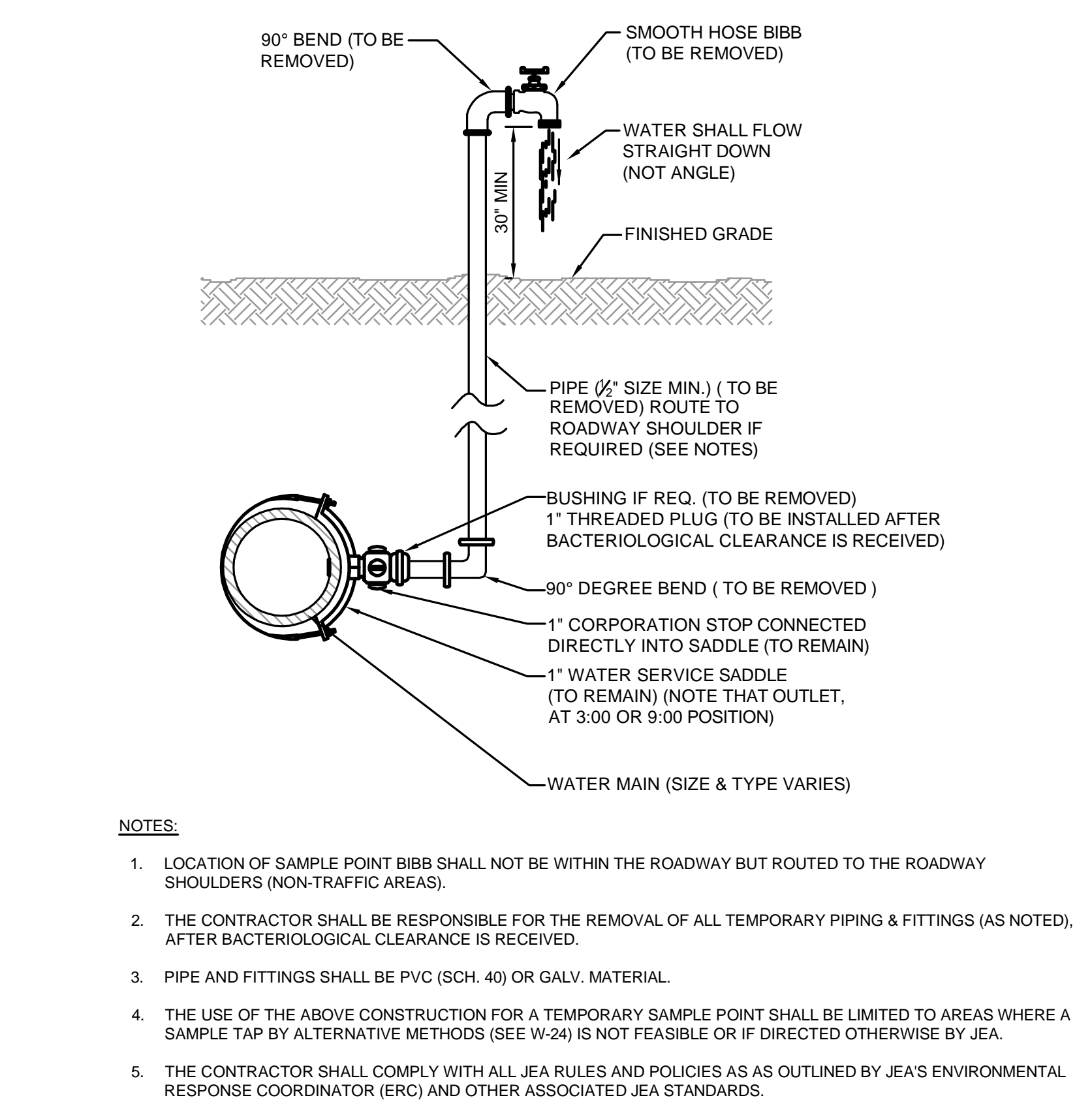
PLATE W-26



WATER SERVICE DETAIL- 2" AND SMALLER METER

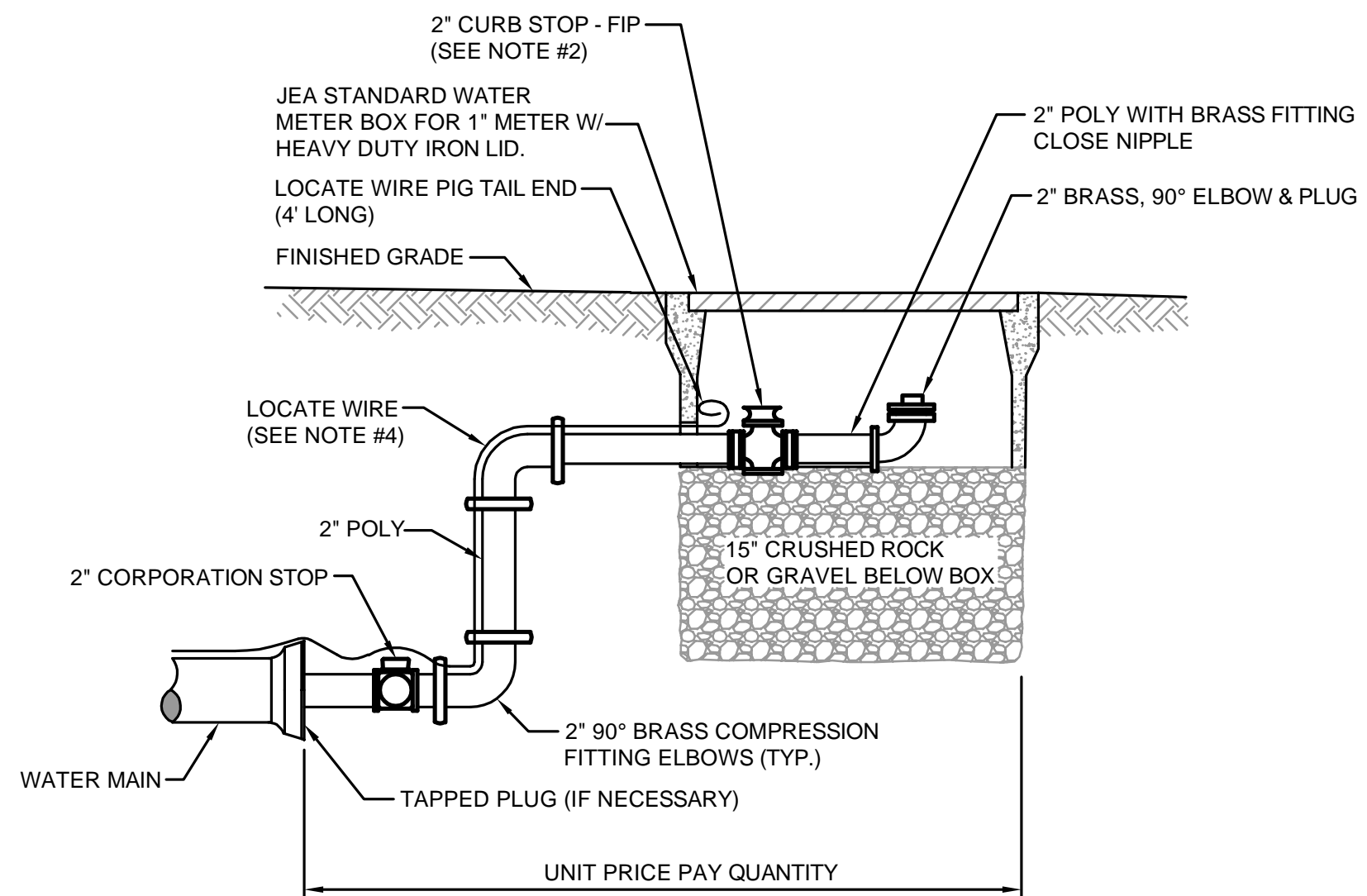
JANUARY 2024

PLATE W-2



JANUARY 2024

PLATE W-25

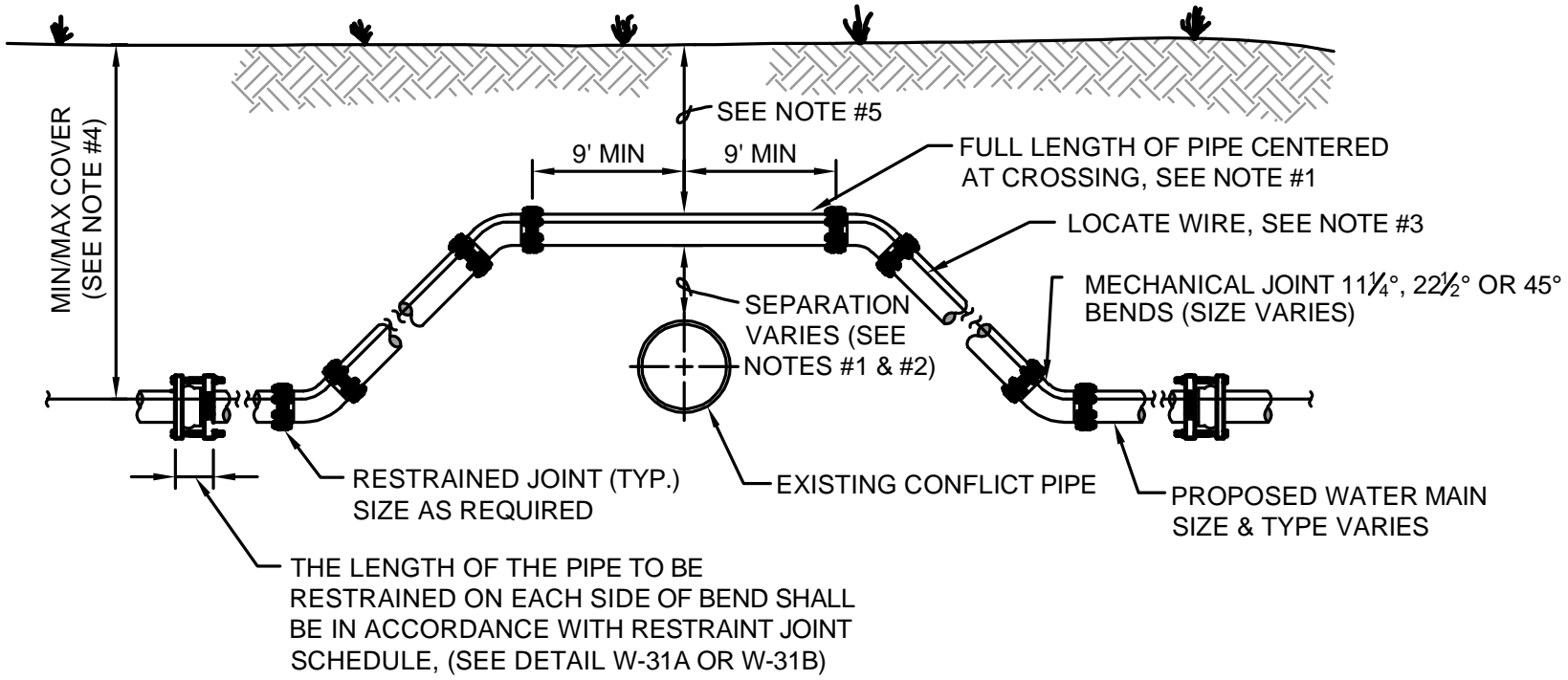


JANUARY 2024

PLATE W-28

England, Thims & Miller, Inc. 14776 Old St. Augustine Road Jacksonville, FL 32228 TEL: (904) 646-4444 FAX: (904) 646-4445 CA - 0000284 LC - 0000316		ETM VISION • EXPERIENCE • RESULTS		THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE JEA. WE TAKE NO EXCEPTION TO THE DESIGN	
NO.	BY	DATE	DESIGN ENGINEER	JOHN ZACHARY BRECHT	FLORIDA REGISTRATION NO.
4.					
3.					
2.					
1.					66569
NO. SHEETS 6		PROJ. NO. 19-239-01-055		JEA STANDARD WATER AND RECLAIMED DETAILS	
SHEET NO. 2		DATE: JANUARY 2024		WILDLIGHT AVENUE PHASE 4	
DRAWING NO. 12B		SCALE: AS NOTED			

I:\2019\19-239\19-239-01 - Royonier Work\19-239-01-055 Wildlight Avenue Extension\LandDev\Design\Plots\JEA-WDET-19-239-01-055.dwg
Current Layout Tab = JEA WTR03
Fri Jun 28, 2024 - 09:08



CASE "A" CROSSING

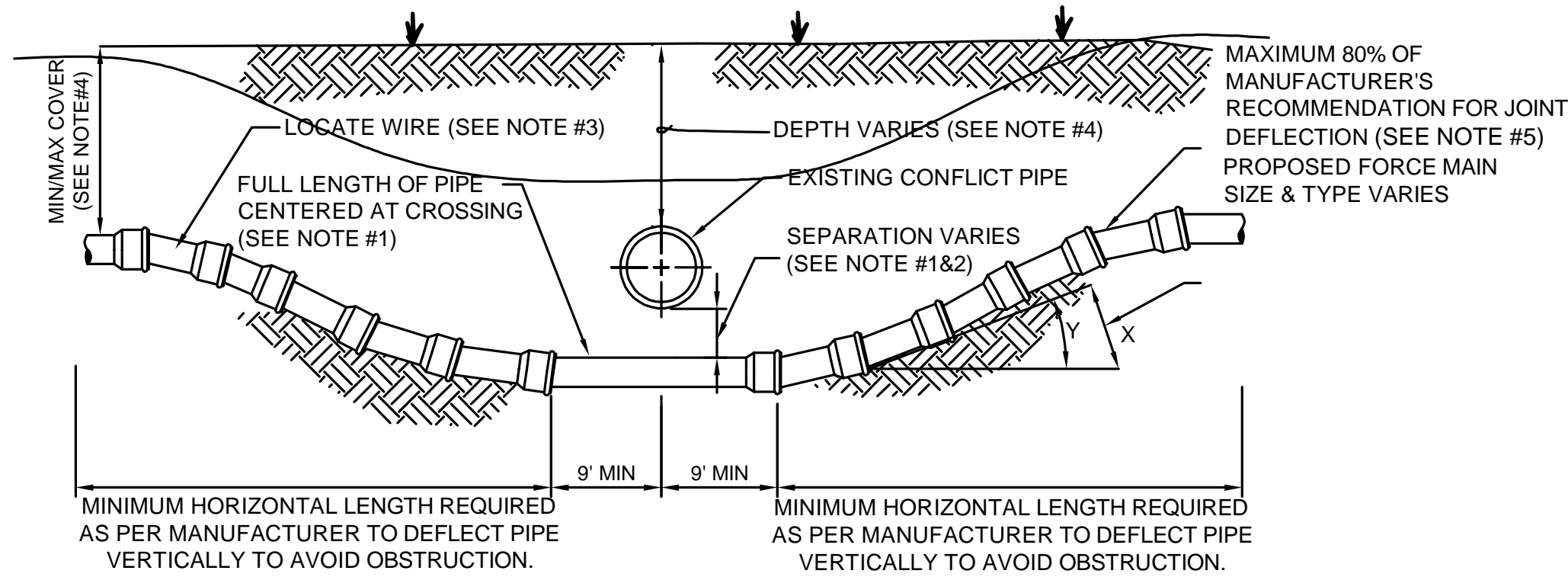
NOTES:

- THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
- FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE DETAIL (W-10 AND W-11).
- LOCATING WIRE REQUIRED: SEE DETAIL W-44.
- THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREAS, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.
- IF UTILITY CONFLICT IS LOCATED IN A NON-TRAFFIC AREA (NO TRAFFIC LOADS) AND THE NEW PIPE IS D.I.P., THEN THE MINIMUM COVER MAY BE REDUCED TO 24 INCHES (ONLY IN THE AREA OF THE CONFLICT).

ADJUSTMENT OVER EXISTING UTILITIES MECHANICAL RESTRAINTS

JANUARY 2024

PLATE W-32



CASE "B" CROSSING

NOTES:

- IF EXISTING CONFLICT PIPE IS A WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
- FOR OTHER LOCATION LIMITATIONS SEE DETAIL (W-10 & W-11).
- LOCATING WIRE REQUIRED: SEE DETAIL W-44.
- THE COVER OVER ALL PIPING LESS THAN 24" SIZE SHALL BE A MINIMUM OF 30" IN UNPAVED AREAS AND 36" IN PAVED AREAS WITH A MAXIMUM COVER OF 60" UNLESS APPROVED OTHERWISE BY JEA. COVER FOR PIPING 24" SIZE AND LARGER SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84" UNLESS APPROVED OTHERWISE BY JEA. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.
- JE A ONLY ALLOWS 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED, UNLESS OTHERWISE APPROVED BY JEA, THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20LF PIPE LENGTH.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

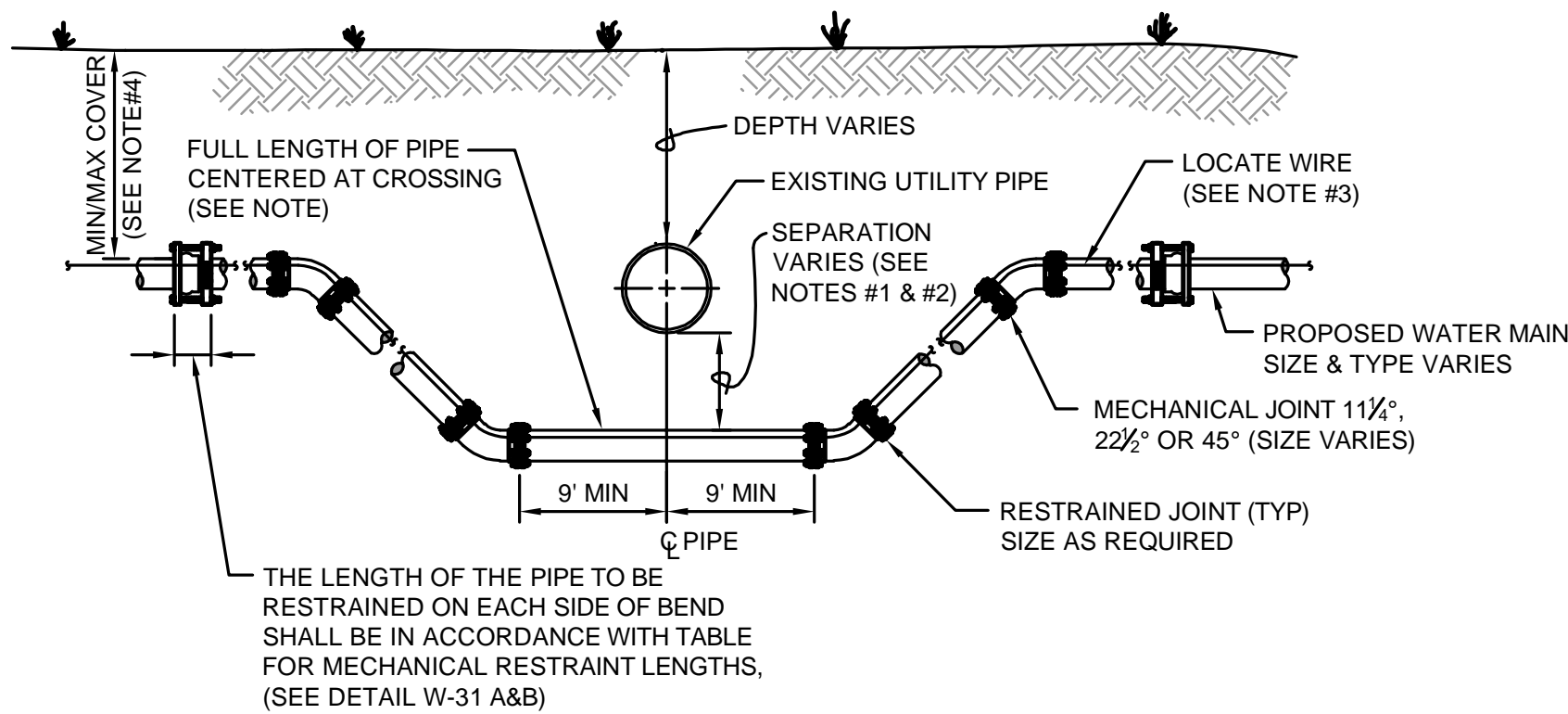
PVC PIPE			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT
4	10	2.4°	480 FT
6	10	2.4°	480 FT
8	10	2.4°	480 FT
10	10	2.4°	480 FT
12	8.5	2°	564 FT
14 - 24	5	1.2°	960 FT
30 - 48	3.25	0.8°	1477 FT

DUCTILE IRON PIPE (Mechanical Joint)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
-	-	-	-
4	27	6.5°	177 FT
6	24	5.7°	200 FT
8 - 12	17.5	4.2°	273 FT
14 - 16	12	2.9°	400 FT
18 - 20	10	2.4°	477 FT
24 - 30	8	1.9°	600 FT
36	7	1.7°	687 FT
42 - 48	6.7	1.6°	716 FT

ADJUSTMENT UNDER EXISTING UTILITIES PIPE JOINT DEFLECTION

JANUARY 2024

PLATE W-40



CASE "B" CROSSING

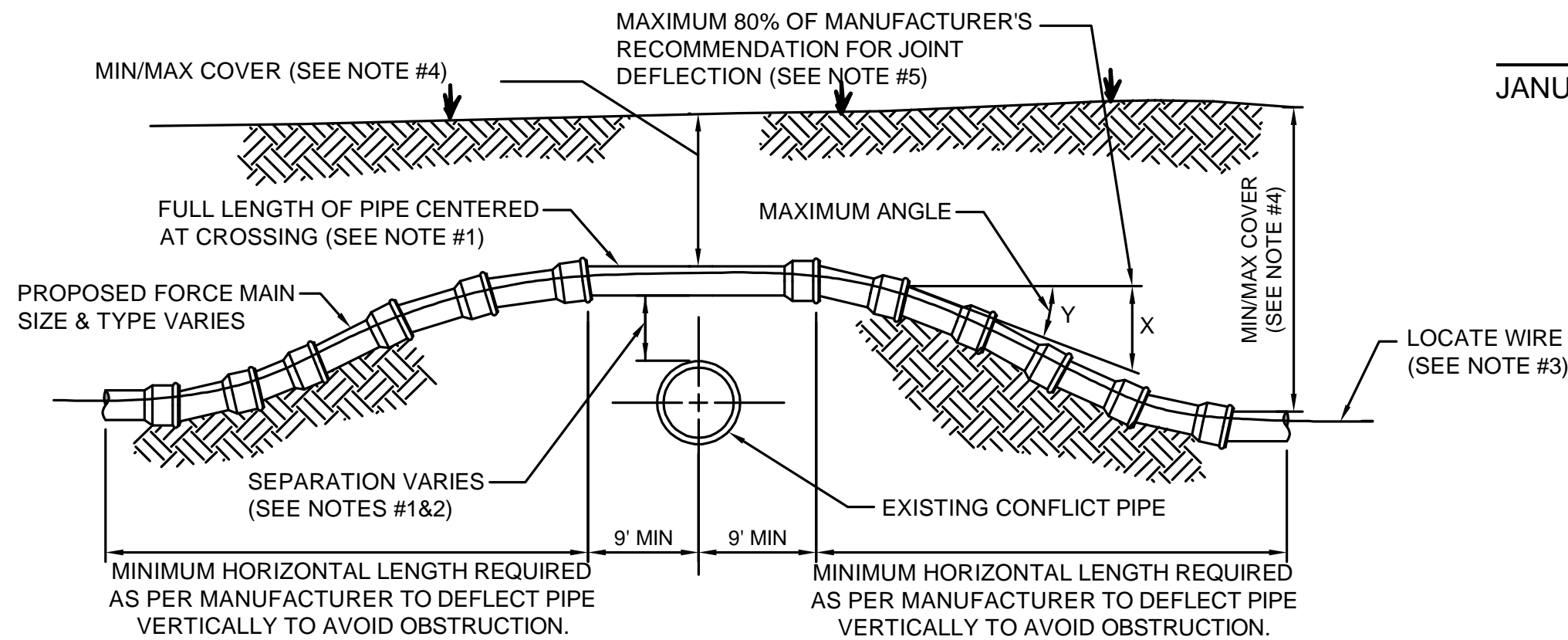
NOTES:

- THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
- FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE DETAILS (W-10 AND W-11).
- LOCATING WIRE REQUIRED: SEE DETAIL W-44.
- THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREA, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.
- IN LOCATIONS WHERE WATER/RECLAIM MAINS CROSS UNDER A BOX-CULVERT, OR 36-INCH DIAMETER AND LARGER STORM WATER MAIN, JEA WILL REQUIRE DIP TO BE UTILIZED FOR THE MAIN.

ADJUSTMENT UNDER EXISTING UTILITIES MECHANICAL RESTRAINTS

JANUARY 2024

PLATE W-34



CASE "A" CROSSING

NOTES:

- IF EXISTING CONFLICT PIPE IS A WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
- FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-10 & W-11).
- LOCATING WIRE REQUIRED: SEE DETAIL W-44.
- THE COVER OVER ALL PIPING LESS THAN 24" SIZE SHALL BE A MINIMUM OF 30" IN UNPAVED AREAS AND 36" IN PAVED AREAS WITH A MAXIMUM COVER OF 60" UNLESS APPROVED OTHERWISE BY JEA. COVER FOR PIPING 24" SIZE AND LARGER SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84" UNLESS APPROVED OTHERWISE BY JEA. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.
- JE A ONLY ALLOWS 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED, UNLESS OTHERWISE APPROVED BY JEA, THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20LF PIPE LENGTH.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

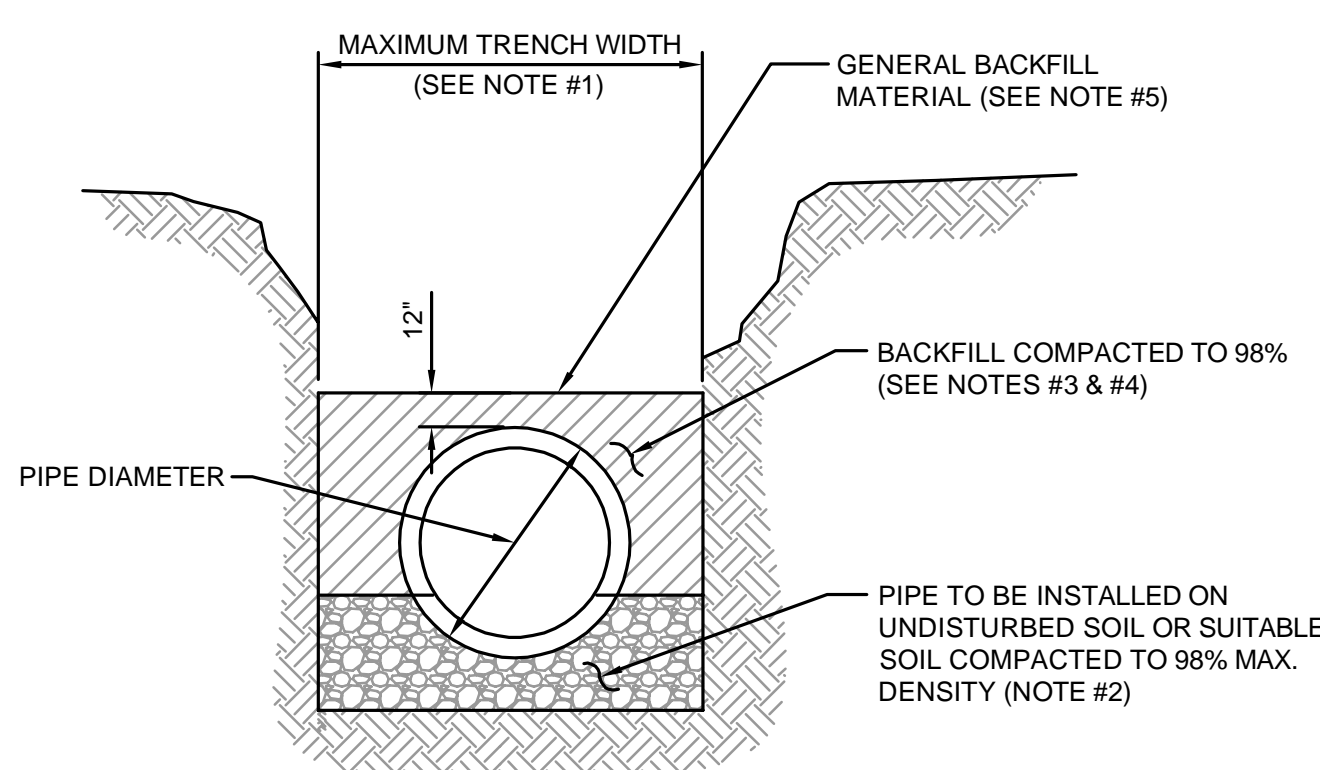
PVC PIPE			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT
4	10	2.4°	480 FT
6	10	2.4°	480 FT
8	10	2.4°	480 FT
10	10	2.4°	480 FT
12	8.5	2°	564 FT
14 - 24	5	1.2°	960 FT
30 - 48	3.25	0.8°	1477 FT

DUCTILE IRON PIPE (Mechanical Joint)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
-	-	-	-
4	27	6.5°	177 FT
6	24	5.7°	200 FT
8 - 12	17.5	4.2°	273 FT
14 - 16	12	2.9°	400 FT
18 - 20	10	2.4°	477 FT
24 - 30	8	1.9°	600 FT
36	7	1.7°	687 FT
42 - 48	6.7	1.6°	716 FT

ADJUSTMENT OVER EXISTING UTILITIES PIPE JOINT DEFLECTION

JANUARY 2024

PLATE W-41



TYPICAL TRENCH

NOTES:

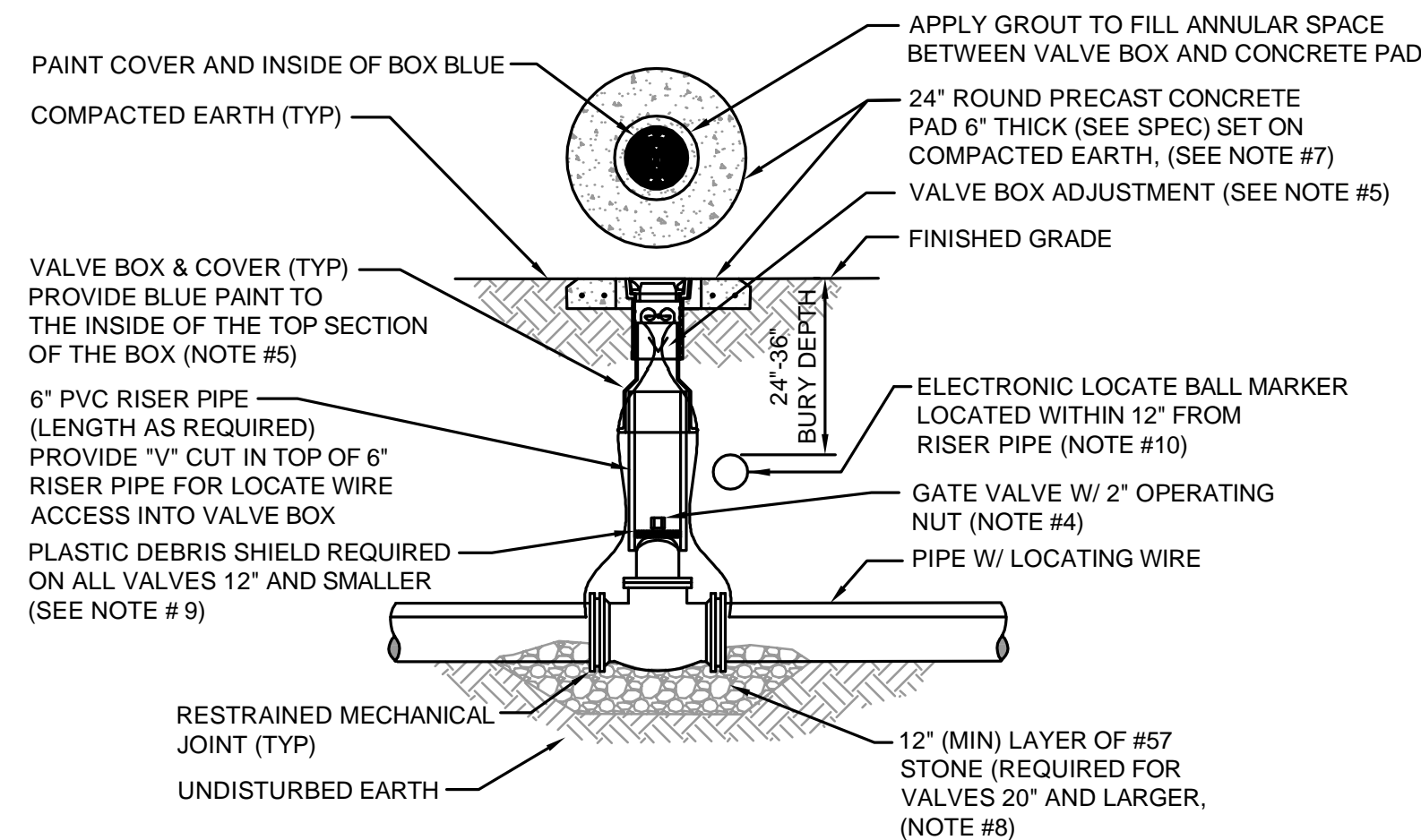
- TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4)) TO DETERMINE MAXIMUM PAYLINE WIDTHS.
- BELL HOLE SHALL BE DUG TO PERMIT THE ENTIRE STRAIGHT BARREL OF THE PIPE TO REST ON THE UNDISTURBED TRENCH BOTTOM. BOULDERS OR LOOSE ROCKS LARGER THAN 3/4 INCH IN SIZE WILL NOT BE PERMITTED IN BACKFILL UP TO 1 FOOT ABOVE THE TOP OF THE PIPE.
- BACK FILL MATERIAL UP TO A LEVEL OF 1 FOOT OVER THE PIPE SHALL CONSIST OF AASHTO CLASS A-3 SOIL (SUITABLE SOIL) AND SHALL EXCLUDE CLAY MATERIALS AND LOOSE ROCKS LARGER THAN 3/4 INCH SIZE.
- BACKFILL MATERIAL UP TO A LEVEL 1 FOOT OVER THE TOP OF PIPE OR BOTTOM OF STRUCTURES SHALL BE PLACED IN 6 INCH COMPACTED THICKNESS LAYERS AND SHALL BE COMPACTED TO 98% OF IT'S MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D1557.
- SEE " EXCAVATION AND EARTHWORK", SECTION 408 FOR ADDITIONAL REQUIREMENTS INCLUDING REMOVAL AND REPLACEMENT OF UNSUITABLE SOILS, DEWATERING, COMPACTION REQUIREMENTS AND DENSITY TESTING OF COMPACTED SOILS.

OPEN CUT TRENCH FOR PRESSURE PIPE

JANUARY 2024

IN CITY RIGHT OF WAY

PLATE W-42



NOTES:

- FOR UNPAVED LOCATIONS, A PRECAST CONCRETE VALVE PAD SHALL BE PROVIDED AND INSTALLED FLUSH WITH GRADE. CONCRETE PAD IS NOT REQUIRED FOR VALVE LOCATED IN THE ROADWAY, UNLESS SHOWN OR NOTED OTHERWISE.
- LOCATING WIRE IS REQUIRED ON ALL PRESSURE PIPING (SEE DETAILW-44).
- A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/ADJACENT// (ASPHALT IF NO CURB) TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED BLUE WATER/PURPLE RECLAIMED.
- IN PAVED AREAS, INSTALL VALVE AT A DEPTH TO ALLOW A 12" MIN. DISTANCE BETWEEN THE VALVE COVER PLATE AND THE TOP OF THE VALVE OPERATING NUT. OUTSIDE OF PAVED AREAS (GRASS), INSTALL VALVE AT A DEPTH TO ALLOW A 6" MINIMUM DISTANCE BETWEEN THE VALVE COVER AND THE TOP OF THE VALVE OPERATING NUT. OPERATING NUT/STEM EXTENSION SHALL BE PROVIDED (WHERE APPLICABLE) SO THAT THE OPERATING NUT WILL BE NO MORE THAN 30 INCHES BELOW FINISHED GRADE.
- FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS. ROUTE LOCATE WIRES THRU A "V" CUT IN THE TOP OF THE 6" PVC RISER PIPE FOR LOCATE WIRE ACCESS INTO VALVE BOX. THE LOCATE WIRES WITH A 24" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
- BRASS IDENTIFICATION TAG INDICATING "WATER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A 1/2" HOLE IN BRASS TAG AND ATTACH TAG (TWIST WIRE AROUND TAG) TO THE END OF THE LOCATE WIRE. TAGS ARE NOT REQUIRED ON VALVES INSTALLED ON FIRE HYDRANT BRANCH LINES.
- IN LIEU OF PRECAST CONCRETE PAD, A 6" THICK X 24" (ROUND OR SQUARE) POURED CONCRETE PAD W/2 - #4 REBAR AROUND PERIMETER, MAY BE USED.
- GRAVEL SHALL BE PROVIDED UNDER ALL VALVES 20" AND LARGER. THE MINIMUM VERTICAL LIMIT OF GRAVEL IS 12" UNDER THE VALVE UP TO 1/3 THE OVERALL HEIGHT OF THE VALVE.
- FOR VALVES 12 INCH AND SMALLER, PROVIDE A WHITE OR BLACK PLASTIC DEBRIS SHIELD WHICH INSTALLS BELOW THE OPERATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE OPERATING NUT AND MINIMIZE INFILTRATION. SHIELD SHALL BE BY AFC, BOXLOK OR APPROVED EQUAL.
- ALL VALVES SHALL BE INSTALLED WITH AN ELECTRIC LOCATE MARKER. MARKER SHALL BE 4" DIA. COLOR CODED BALL MARKER (3M-1403XR FOR WATER AND 1408XR FOR RECLAIMED WATER).

WATER VALVE INSTALLATION DETAIL

JANUARY 2024

PLATE W-18

England, Thims & Miller, Inc.
14776 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 646-4444
FAX: (904) 646-4445
CA - 0000284 LC - 0000316

ETM
VISION • EXPERIENCE • RESULTS

THESE DETAILS AS SHOWN ON THIS
DRAWING ARE BY THE JEA. WE TAKE
NO EXCEPTION TO THE DESIGN

DESIGNER		DESIGN ENGINEER		REVISIONS	
DRAWN BY:	DATE:	JOHN ZACHARY BRECHT	DATE:	NO.	BY
CHECKED BY:	DATE:	FLORIDA REGISTRATION NO.	DATE:	4.	
				3.	
				2.	
				1.	

JEA
Building Community

JE A STANDARD
WATER AND RECLAIMED DETAILS
WILDLIGHT AVENUE PHASE 4

PROJ. NO.	19-239-01-055	NO. SHEETS	6
DATE:	JANUARY 2024	SHEET NO.	3
SCALE:	AS NOTED	DRAWING NO.	12C

PVC PIPE RESTRAINT NOTES:

- THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
- ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
- BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
- VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, L_U IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. L_L IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
- TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
- HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
- THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED, OVERHOMING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

LENGTH (L) TO BE RESTRAINED

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS L (FT.)
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)	
4	21	9	5	3	17	3	47
6	30	13	6	3	23	4	66
8	38	16	8	4	30	6	86
10	45	19	9	5	36	7	103
12	53	22	11	6	43	8	121
14	61	26	13	6	50	9	140
16	66	28	14	7	55	10	154
18	73	30	15	8	60	11	170
20	79	33	16	8	66	12	186
24	79	33	16	8	77	15	185
30	93	39	19	10	97	17	222
36	106	39	21	11	107	20	257
42	117	49	24	12	120	24	289
48	144	53	26	13	133	26	321

(SEE PLATE Nos. 38C & 38D FOR ADDITIONAL DETAILS)

REDUCERS	
SIZE (IN.)	L (FT.)
6x4	34
8x6	36
8x4	62
10x8	35
10x6	63
12x10	36
12x8	64
16x12	66
16x10	92
20x18	35
20x16	66
20x12	117
24x20	56
24x18	80
24x16	101
30x24	78
30x20	121
36x30	78
36x24	141
42x36	75
42x30	140
48x42	75
48x36	139

TEES SEE NOTE 5		
RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)
4	4	F.O.
4	6	10 F.O.
4	4 < LESS	9 F.O.
8	6 < LESS	29 F.O.
10	10	45 F.O.
10	8	13 F.O.
10	6 < LESS	8 F.O.
12	12	62 F.O.
12	10	32 F.O.
12	8 < LESS	10 F.O.
16	16	94 F.O.
16	12	39 F.O.
16	10	5 F.O.
16	10 < LESS	125 F.O.
20	20	125 F.O.
20	16	76 F.O.
20	12	14 F.O.
20	10 < LESS	125 F.O.
24	24	124 F.O.
24	20	84 F.O.
24	16	36 F.O.
24	12 < LESS	160 F.O.
30	30	159 F.O.
30	24	104 F.O.
30	20	60 F.O.
30	16 < LESS	160 F.O.
36	36	192 F.O.
36	30	142 F.O.
36	24	83 F.O.
36	20	33 F.O.
36	16 < LESS	192 F.O.
42	42	223 F.O.
42	36	178 F.O.
42	30	124 F.O.
42	24	59 F.O.
42	20	5 F.O.
42	16 < LESS	223 F.O.
48	48	253 F.O.
48	42	209 F.O.
48	36	162 F.O.
48	30	104 F.O.
48	24	34 F.O.
48	20 < LESS	253 F.O.

F.O. = FITTING ONLY

DUCTILE IRON PIPE RESTRAINT NOTES:

- THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
- ASSUMPTIONS: DUCTILE IRON PIPE (WITHOUT POLY WRAP), SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE. FOR D.I.P. W/POLY WRAP, USE RESTRAINT JOINT SCHEDULE FOR PVC PIPE.
- BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
- VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, L_U IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. L_L IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
- TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
- HDPE TO D.I.P. TRANSITIONS: THE D.I.P. PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).

LENGTH (L) TO BE RESTRAINED

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS L (FT.)
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)	
4	17	7	4	2	11	3	30
6	24	15	5	3	15	4	42
8	31	13	6	3	20	5	55
10	36	15	8	4	23	6	65
12	42	18	9	5	27	7	77
14	48	20	10	5	31	7	87
16	53	22	11	6	35	8	97
18	58	24	12	6	39	9	107
20	63	27	13	6	42	10	118
24	63	27	13	7	49	12	118
30	75	31	15	8	59	14	141
36	86	36	17	9	68	17	163
42	95	40	19	10	76	19	183
48	117	43	21	11	84	21	203

REDUCERS	
SIZE (IN.)	L (FT.)
6x4	22
8x6	23
8x4	39
10x8	22
10x6	40
12x10	23
12x8	41
16x12	42
16x10	58
20x18	22
20x16	42
20x12	74
24x20	36
24x18	51
24x16	64
30x24	50
30x20	77
36x30	50
36x24	89
42x36	48
42x30	89
48x42	48
48x36	88

TEE SEE NOTE 5		
RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)
4	4	F.O.
4	6	6 F.O.
4	4 < LESS	8 F.O.
8	8	19 F.O.
8	6 < LESS	10 F.O.
10	10	29 F.O.
10	8	9 F.O.
10	6 < LESS	8 F.O.
12	12	40 F.O.
12	10	21 F.O.
12	8 < LESS	10 F.O.
16	16	60 F.O.
16	12	25 F.O.
16	10	3 F.O.
16	8 < LESS	10 F.O.
20	20	79 F.O.
20	16	48 F.O.
20	12	9 F.O.
20	10 < LESS	120 F.O.
24	24	79 F.O.
24	20	54 F.O.
24	16	23 F.O.
24	12 < LESS	120 F.O.
30	30	101 F.O.
30	24	66 F.O.
30	20	38 F.O.
30	16	4 F.O.
30	12 < LESS	120 F.O.
36	36	122 F.O.
36	30	90 F.O.
36	24	53 F.O.
36	20	21 F.O.
36	16	1 F.O.
36	12 < LESS	120 F.O.
42	42	141 F.O.
42	36	113 F.O.
42	30	79 F.O.
42	24	38 F.O.
42	20	3 F.O.
42	16	1 F.O.
42	12 < LESS	120 F.O.
48	48	160 F.O.
48	42	133 F.O.
48	36	103 F.O.
48	30	66 F.O.
48	24	22 F.O.
48	20 < LESS	160 F.O.

F.O. = FITTING ONLY

PVC PIPE RESTRAINT JOINT SCHEDULE

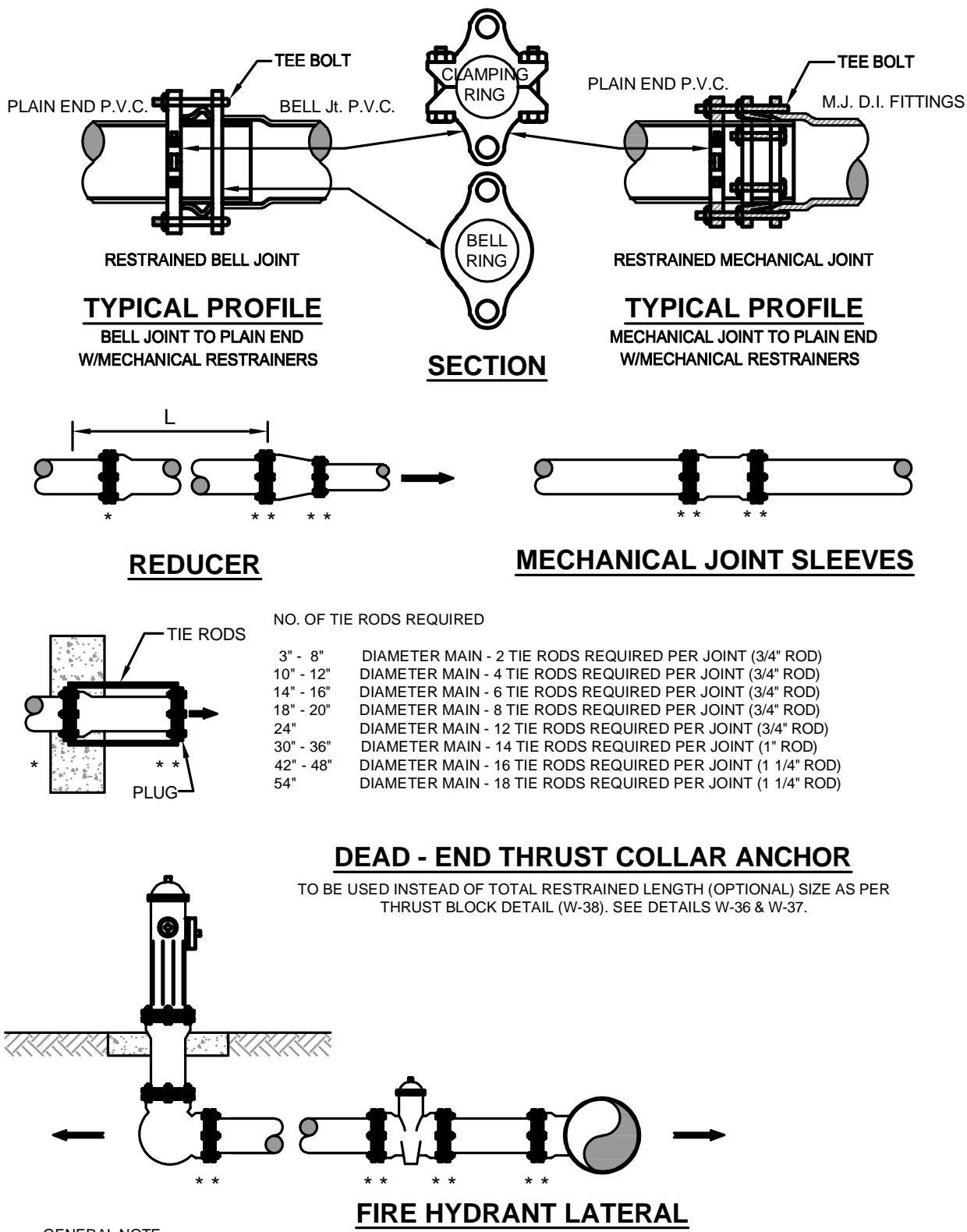
JANUARY 2024

PLATE W-31A

DUCTILE IRON PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2024

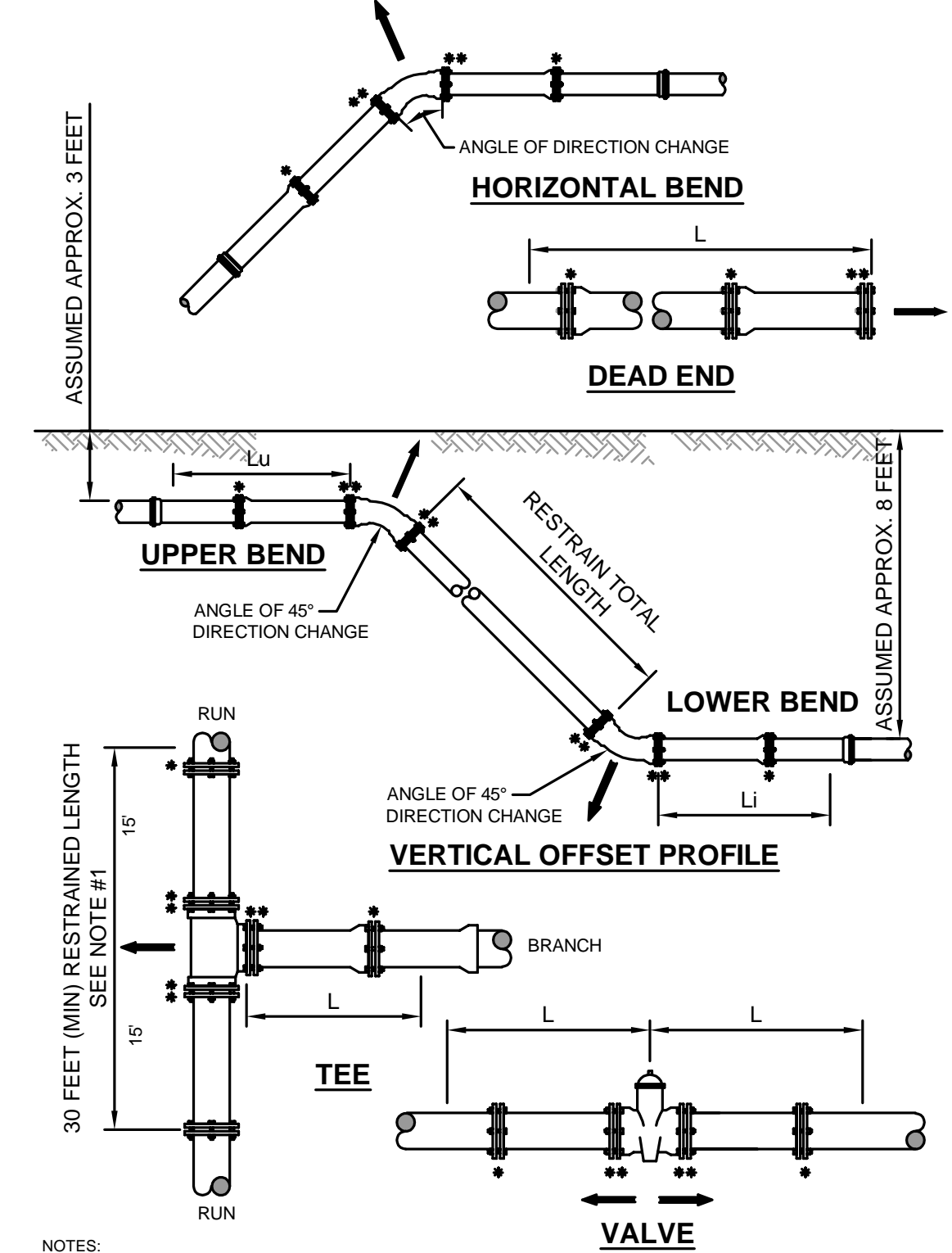
PLATE W-31B



MECHANICAL RESTRAINT DETAILS - I

JANUARY 2024

PLATE W-31C



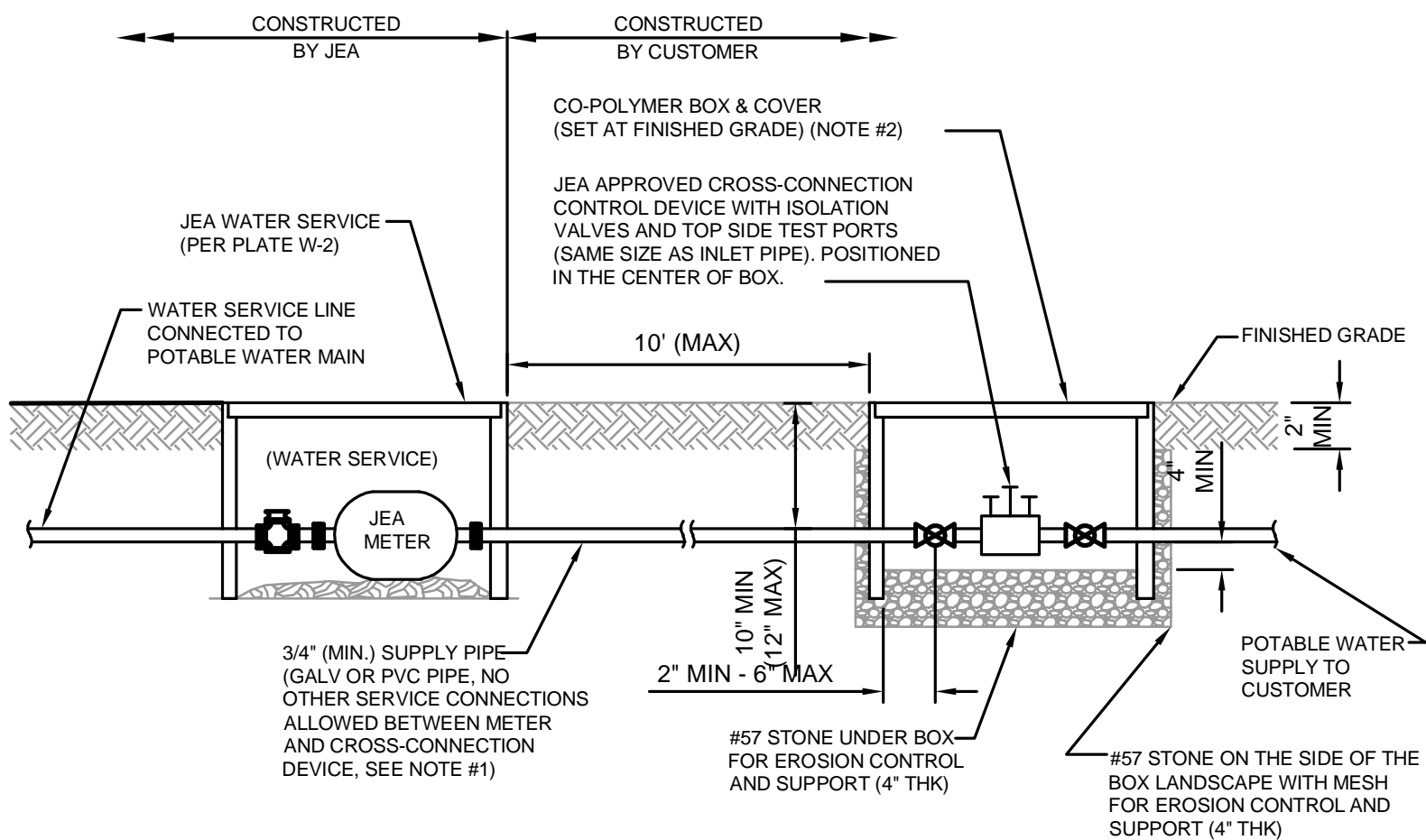
NOTES:

- TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN).
- PAY ITEM *** DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIS.
- PAY ITEM **** DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.

MECHANICAL RESTRAINT DETAILS - II

JANUARY 2024

PLATE W-31D



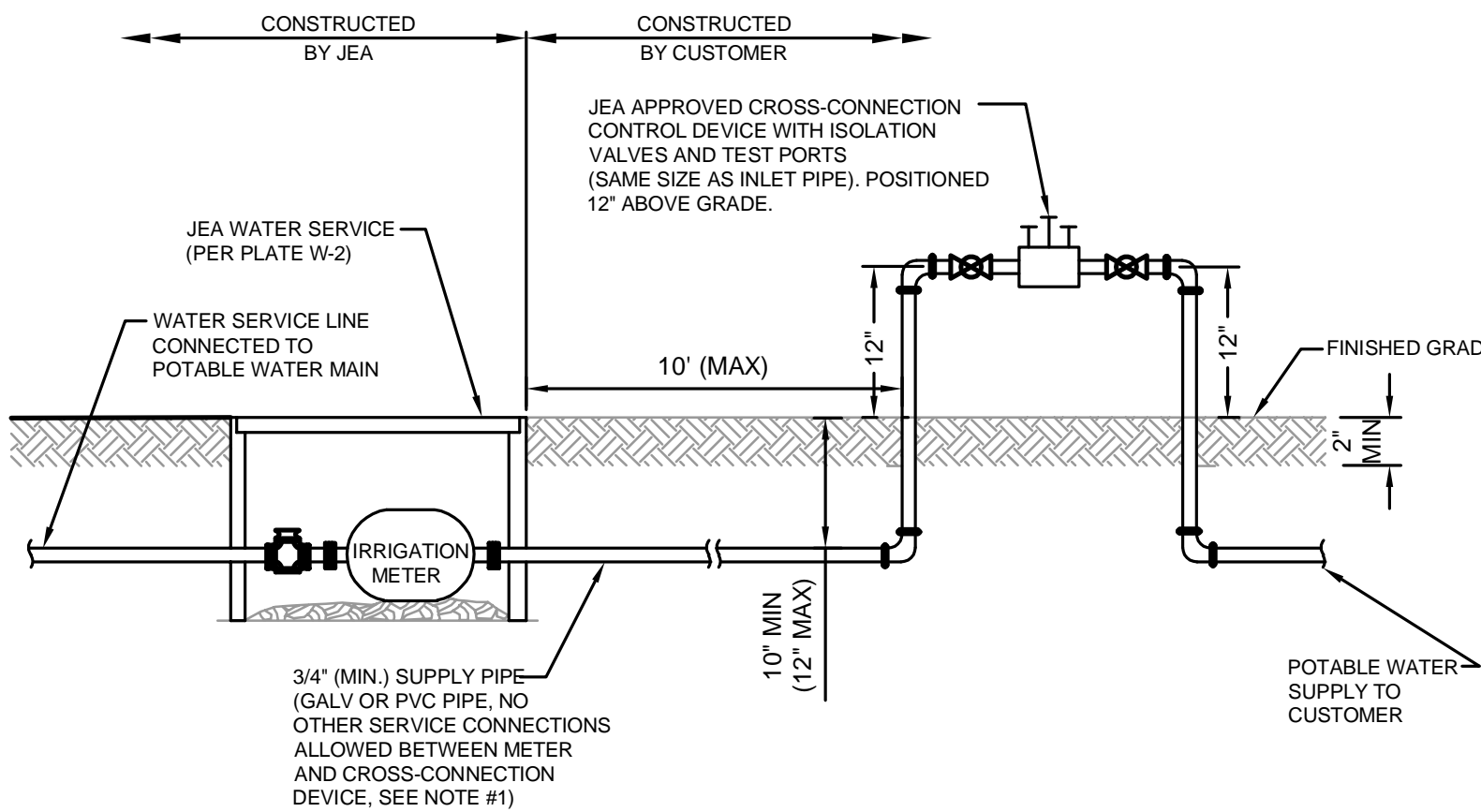
NOTES:

- THE POTABLE WATER CUSTOMER IS REQUIRED TO INSTALL AND MAINTAIN A JEA APPROVED CROSS-CONNECTION DEVICE ON THEIR POTABLE WATER SERVICE LINE. OPERATION AND MAINTENANCE OF THIS CROSS-CONNECTION DEVICE SHALL COMPLY WITH JEA'S CROSS-CONNECTION CONTROL PROGRAM AND ASSOCIATED OPERATIONS POLICIES. ALL REDUCED PRESSURE ASSEMBLIES SHALL BE MOUNTED ABOVE GRADE.
- ONLY DOUBLE CHECK VALVE ASSEMBLIES MAY BE INSTALLED BELOW GROUND. THESE DEVICES MAY BE INSTALLED IN A TYPICAL 1" (CO-POLYMER) METER BOX WITH SOLID LID WITH NO "JEA" LOGO, SEE ALSO W-3). THE SIZE OF BOX SHALL BE 12"x20". AT A MINIMUM, IT SHALL BE NOTED THAT IF THE HIGH MEAN GROUND WATER LEVEL FALLS INSIDE THIS BOX, THEN THE CROSS-CONNECTION CONTROL DEVICE MUST BE INSTALLED ABOVE GROUND. ACCEPTABLE DOUBLE CHECK VALVE ASSEMBLIES (BRONZE BODY WITH TWO CHECK VALVES, TWO BALL VALVES AND UNION CONNECTIONS BETWEEN BALL VALVES AND THE DEVICE). INCLUDE: WATTS U007M2QT, WILKINS 950XLTO OR JEA APPROVED EQUAL.
- BACKFLOW PREVENTION DEVICES REQUIRED WHEN:
IRRIGATION SYSTEMS - REQUIRED ON IRRIGATION SYSTEMS AT THE CONNECTION TO POTABLE SYSTEM
RESIDENTIAL SYSTEMS - REQUIRED ON WATER SERVICE IF RECLAIMED SERVICE WATER AVAILABLE TO SITE
COMMERCIAL SITES - REQUIRED ON ALL WATER SERVICES
INDUSTRIAL SITES - REQUIRED ON BOTH WATER AND RECLAIMED SERVICE ON, WATER SERVICE EVEN IF NO RECLAIMED
- JEA IRRIGATION SERVICE CONNECTIONS REQUIRE ABOVE GRADE REDUCED PRESSURE BACKFLOW PREVENTERS. (SEE PLATE W-15A)

RECLAIM CROSS CONNECTION CONTROL DEVICE

JANUARY 2024

PLATE W-15



NOTES:

- WATER SERVICE CONNECTIONS REQUIRE ABOVE GRADE REDUCED PRESSURE BACKFLOW PREVENTERS. (SEE PLATE W-15)
- BACKFLOW PREVENTION DEVICES REQUIRED WHEN:
IRRIGATION SYSTEMS - REQUIRED ON IRRIGATION SYSTEMS AT THE CONNECTION TO POTABLE SYSTEM
RESIDENTIAL SYSTEMS - REQUIRED ON WATER SERVICE IF RECLAIMED SERVICE WATER AVAILABLE TO SITE
COMMERCIAL SITES - REQUIRED ON ALL WATER SERVICES
INDUSTRIAL SITES - REQUIRED ON BOTH WATER AND RECLAIMED SERVICE CONNECTIONS.
- RESIDENTIAL IRRIGATION SERVICES MAY UTILIZE AN ALTERNATE BACKFLOW PREVENTER LOCATION IF THE FOLLOWING CONDITIONS EXIST:
3.a. CUSTOMER HAS SUBMITTED A COMPLETED "CUSTOMER AFFIDAVIT" FORM AND
3.b. THERE ARE NO ADDITIONAL CONNECTIONS BETWEEN THE METER AND THE BACKFLOW PREVENTER, AND
3.c. THE ALTERNATE BACKFLOW LOCATION IS EASILY ACCESSIBLE TO JEA AND BACKFLOW TESTERS.

CROSS CONNECTION CONTROL DEVICE

JANUARY 2024

JEA IRRIGATION SERVICE CONNECTIONS

PLATE W-15A

England, Thims & Miller, Inc.
14776 Old St. Augustine Road
Jacksonville, FL 32228
TEL: (904) 644-3228
FAX: (904) 644-9485
CA - 0002384 LC - 000316

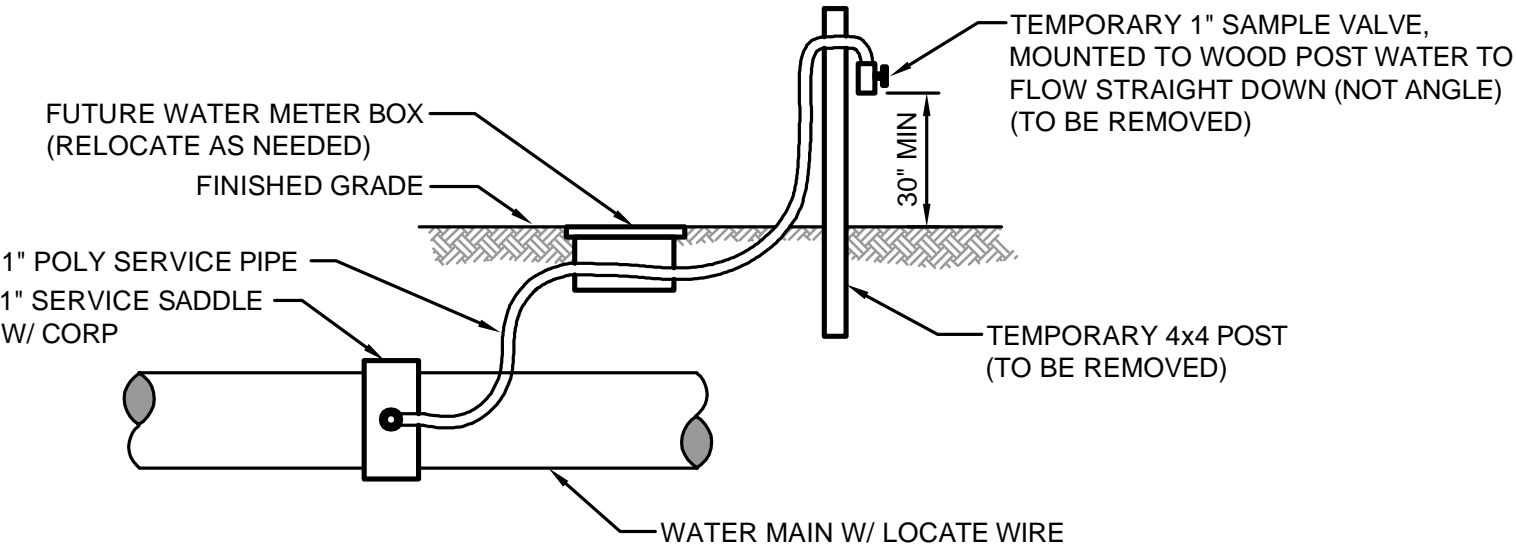
THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE JEA. WE TAKE NO EXCEPTION TO THE DESIGN

ETM
VISION • EXPERIENCE • RESULTS

NO. SHEETS	SHEET NO.	DRAWING NO.	PROJ. NO.	DATE:	SCALE:	DESIGNER:	CHECKED BY:	DATE:	BY:	DATE:	REVISIONS
6	4	12D	19-239-01-055	JANUARY 2024	AS NOTED	JOHN ZACHARY BRECHT	FLORIDA REGISTRATION NO.	66569			

JEA STANDARD
WATER AND RECLAIMED DETAILS
WILDLIGHT AVENUE PHASE 4

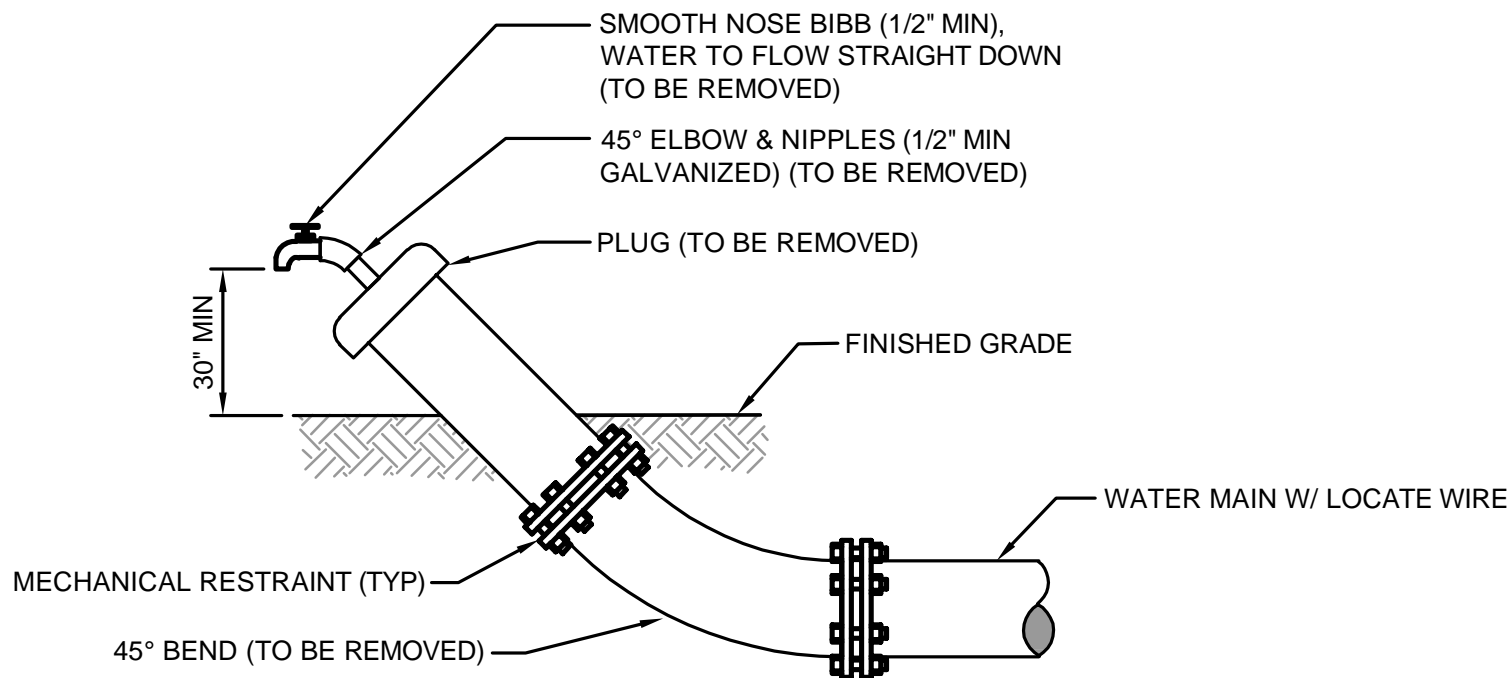
JEA
Building Community



TEMPORARY SAMPLE TAP UTILIZING A NEW 1" WATER SERVICE

NOTES:

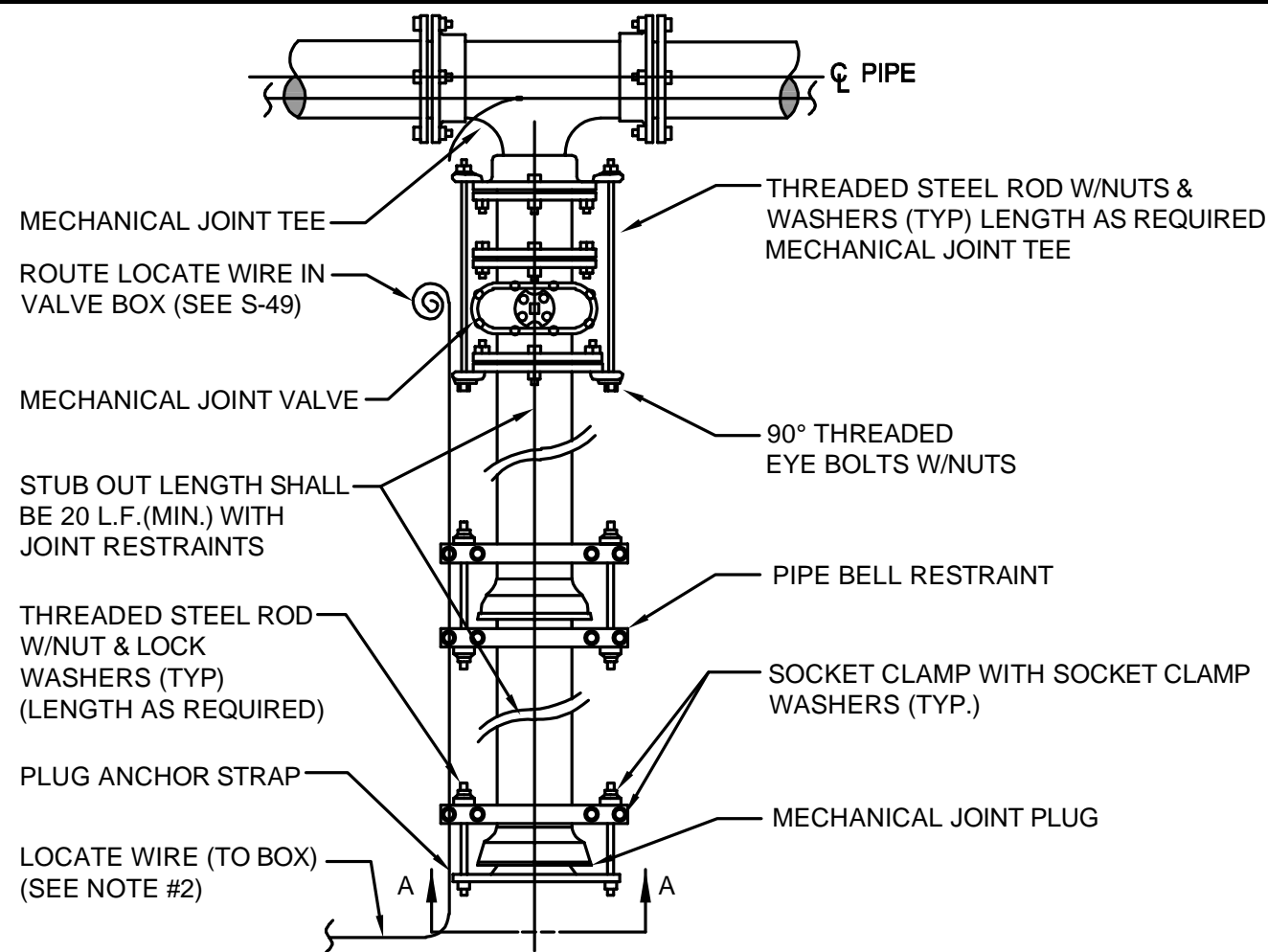
1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
4. THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICIES AS OUTLINED BY THE JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.



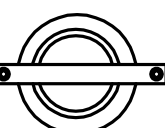
TEMPORARY SAMPLE TAP UTILIZING PLUG AT FLUSHING LOCATION

NOTES:

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
4. THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICIES AS OUTLINED BY THE JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.



PLAN



SECTION "A-A"

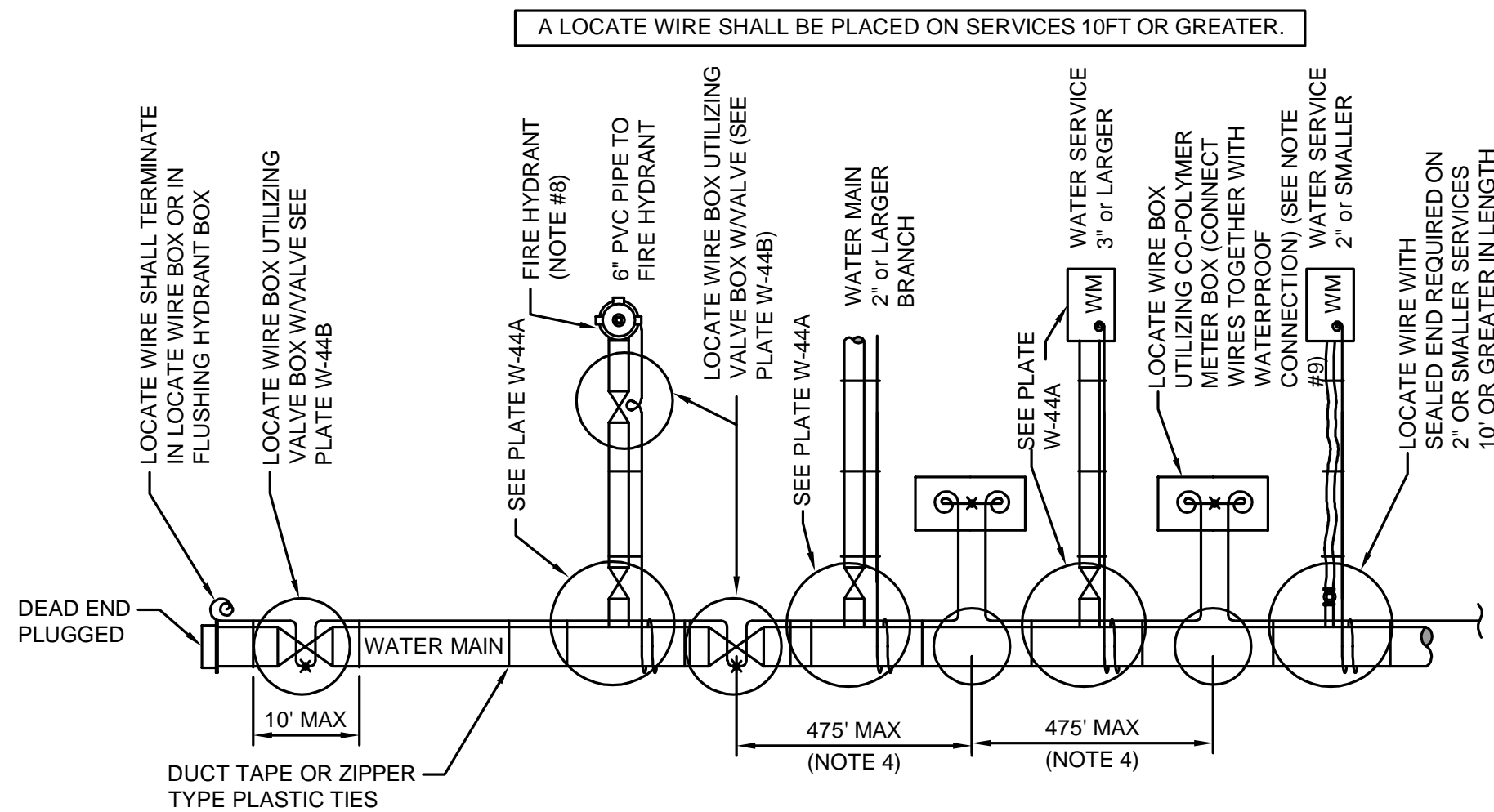
NOTES:

1. IN LIEU OF BELL/ROD RESTRAINTS, MECHANICAL JOINT RESTRAINTS MAY BE USED.
2. LOCATING WIRE REQUIRED, UTILIZING A LOCATE WIRE BOX INSTALLED AT PLUG LOCATION.
3. NUMBER OF TIE RODS REQUIRED IS AS FOLLOWS:
3" - 8" DIAMETER MAIN - 2 TIE RODS REQUIRED PER JOINT (3/4" ROD)
10" - 12" DIAMETER MAIN - 4 TIE RODS REQUIRED PER JOINT (3/4" ROD)
14" - 16" DIAMETER MAIN - 6 TIE RODS REQUIRED PER JOINT (3/4" ROD)
18" - 20" DIAMETER MAIN - 8 TIE RODS REQUIRED PER JOINT (3/4" ROD)
24" DIAMETER MAIN - 12 TIE RODS REQUIRED PER JOINT (3/4" ROD)
30" - 36" DIAMETER MAIN - 14 TIE RODS REQUIRED PER JOINT (1" ROD)
42" - 48" DIAMETER MAIN - 16 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
54" DIAMETER MAIN - 18 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
4. THE LOCATION OF THE DEAD END PLUG SHALL NOT BE UNDER PAVEMENT, IF POSSIBLE. THE STUB OUT SHALL EXTEND BEYOND THE INTERSECTION AREAS OR ROAD CROSSING BY 10 FEET (MIN.) WHERE POSSIBLE.

TEMPORARY SAMPLE TAP ALTERNATIVE METHOD A

JANUARY 2024

PLATE W-24



LOCATE WIRE SYSTEM

NOTES:

1. LOCATING WIRE TO BE INSTALLED IN EITHER THE ONE OR ELEVEN O'CLOCK POSITION ON ALL DUCTILE IRON OR PVC (PRESSURE MAINS). LOCATE WIRE SHALL ALSO BE INSTALLED ON ALL (HDPE) POLY MAIN PIPING (1:00 OR 11:00 POSITION, IF POSSIBLE).
2. SECURE LOCATING WIRE TO PVC & D.I.P. WATER MAIN BY USE OF DUCT TAPE OR ZIPPER TYPE PLASTIC TIE STRAPS SPACED AT A MAXIMUM DISTANCE OF TEN (10) AND AT EACH SIDE OF BELL JOINT OR FITTING.
3. THE ENTIRE LOCATING SYSTEM SHALL BE SUBJECTED TO TESTING TO DETERMINE ITS RELIABILITY. WHERE INSTALLED UNDER PAVEMENT AREAS, TESTING SHALL BE DONE PRIOR TO THE PLACEMENT OF PAVEMENT, UNLESS APPROVED OTHERWISE BY JEA.
4. LOCATING WIRE SHALL TERMINATE WITHIN AN ACTIVE VALVE BOX (WITH A VALVE) OR A METER BOX (IF NO VALVE) AT 475' INTERVALS. SEE DETAIL PLATE W-44B. WIRE CONNECTIONS BELOW GROUND (OUTSIDE OF A BOX) SHALL BE AVOIDED.
5. REFER TO SECTION 350 FOR LOCATE WIRE SPECIFICATIONS.
6. "X" INDICATES THAT THE WIRES ARE CONNECTED TOGETHER WITH A WATERPROOF CONNECTION. (SEE DETAIL W-44B)
7. "C" INDICATES A WIRE PIG-TAIL (4' LONG)
8. FOR FIRE HYDRANT LOCATE WIRE REQUIREMENTS AND EXCLUSIONS, SEE PLATES W-12,13 AND 14.
9. AN "LW" CUT SHALL BE CARVED IN THE CONCRETE CURB AND PAINTED AT ALL LOCATE WIRE BOXES.
10. FOUR LANES OF TRAFFIC (HAVING TWO LANES OF TRAFFIC IN EACH DIRECTION) OR GREATER THE LOCATE WIRE AND VALVE BOX SHALL BE OFF-SET TO THE RIGHT-OF-WAY.

LOCATE WIRE CONSTRUCTION FOR WATER MAINS

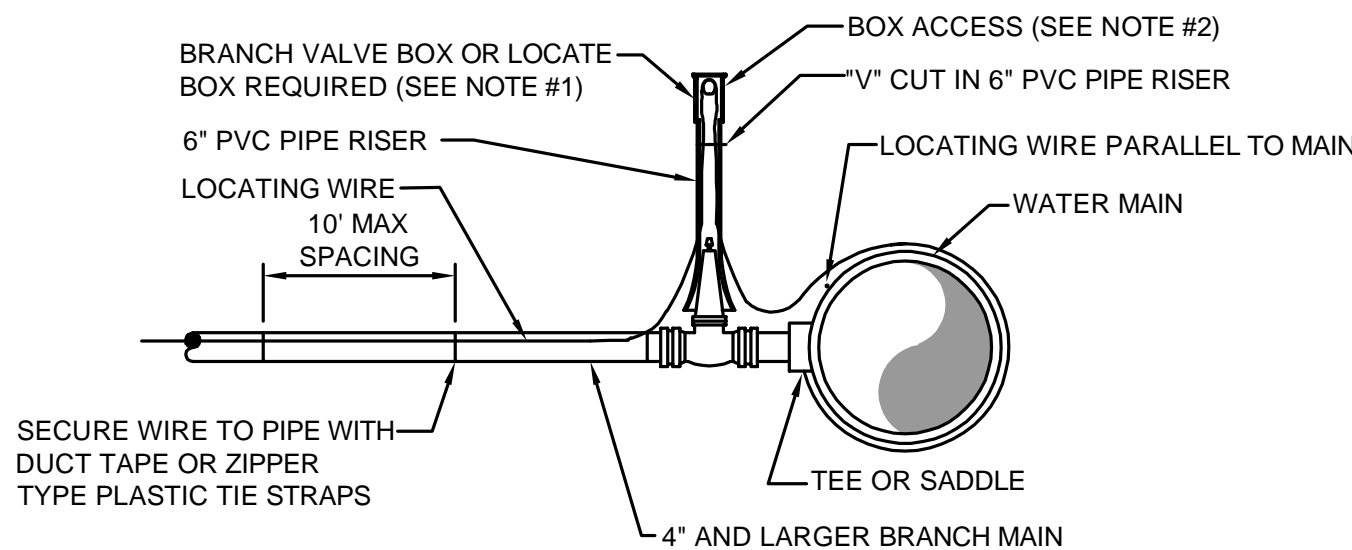
JANUARY 2024

PLATE W-44

TEMPORARY SAMPLE TAP ALTERNATIVE METHOD B

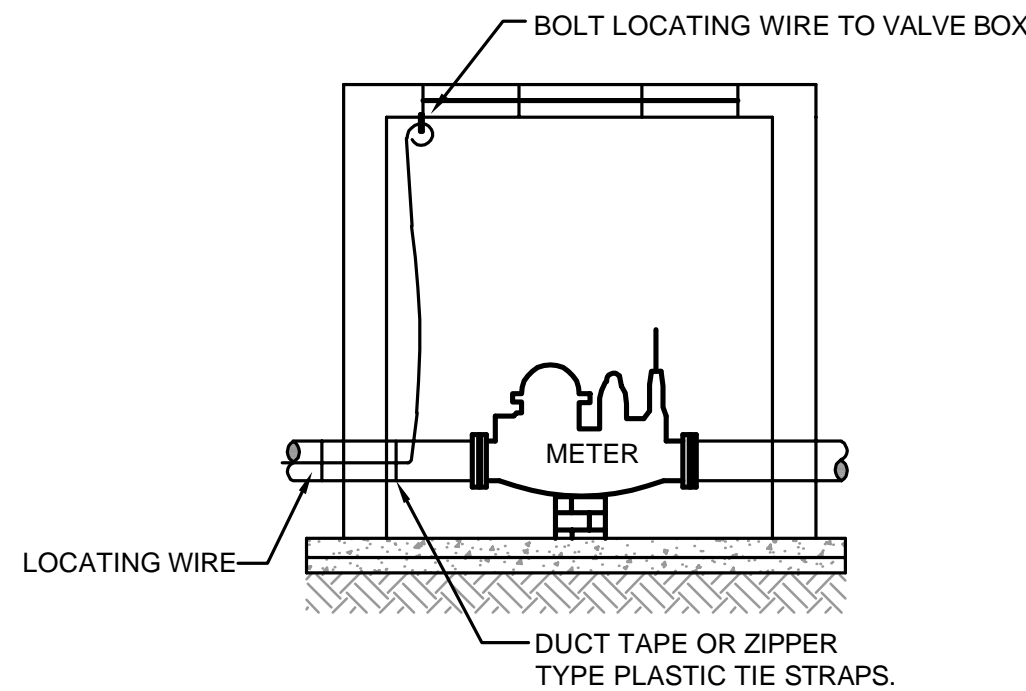
JANUARY 2024

PLATE W-24A



BRANCH FORCE MAIN

(2" AND LARGER WATER MAIN OR 3" AND LARGER WATER SERVICE PIPE)



CONNECTION AT LARGE METER BOX

(3" OR LARGER SERVICE)

NOTES:

1. NOTE THAT THE BRANCH WIRE IS NOT CONNECTED TO THE MAIN WIRE.
2. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE SECTION (SEE W-18).
3. LOCATE WIRE SHALL HAVE ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE AND LOCATE POINTS.

LOCATE WIRE FOR BRANCH MAIN

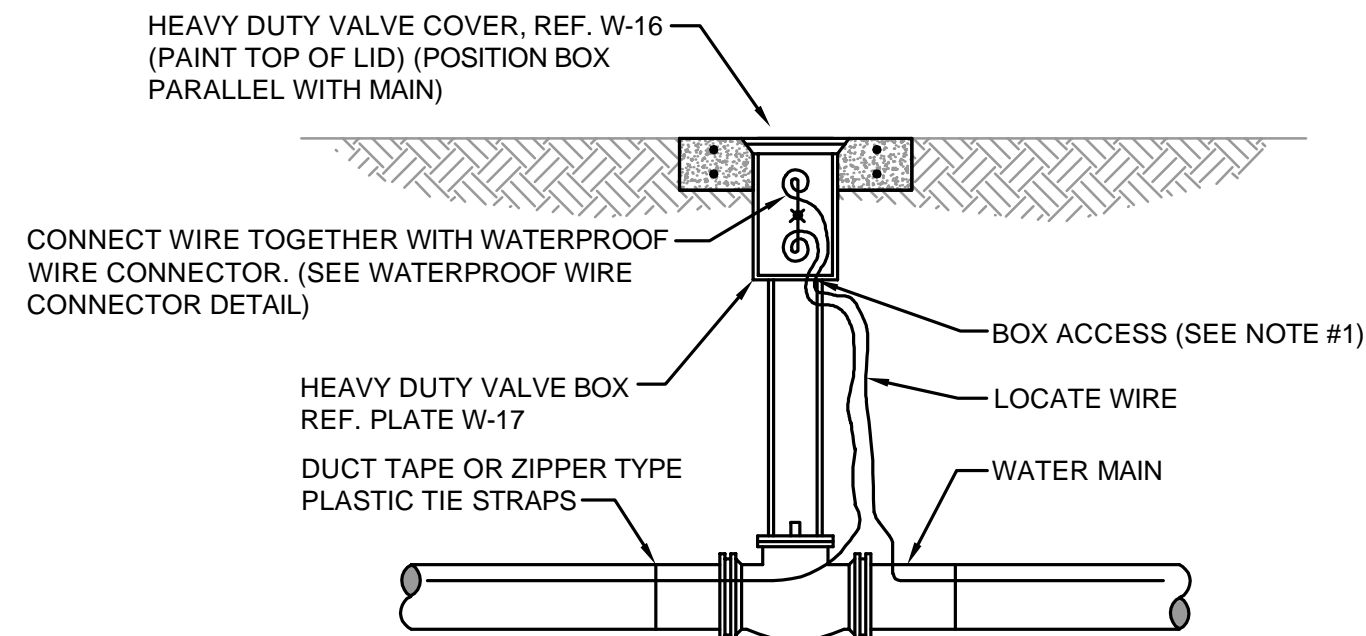
JANUARY 2024

PLATE W-44A

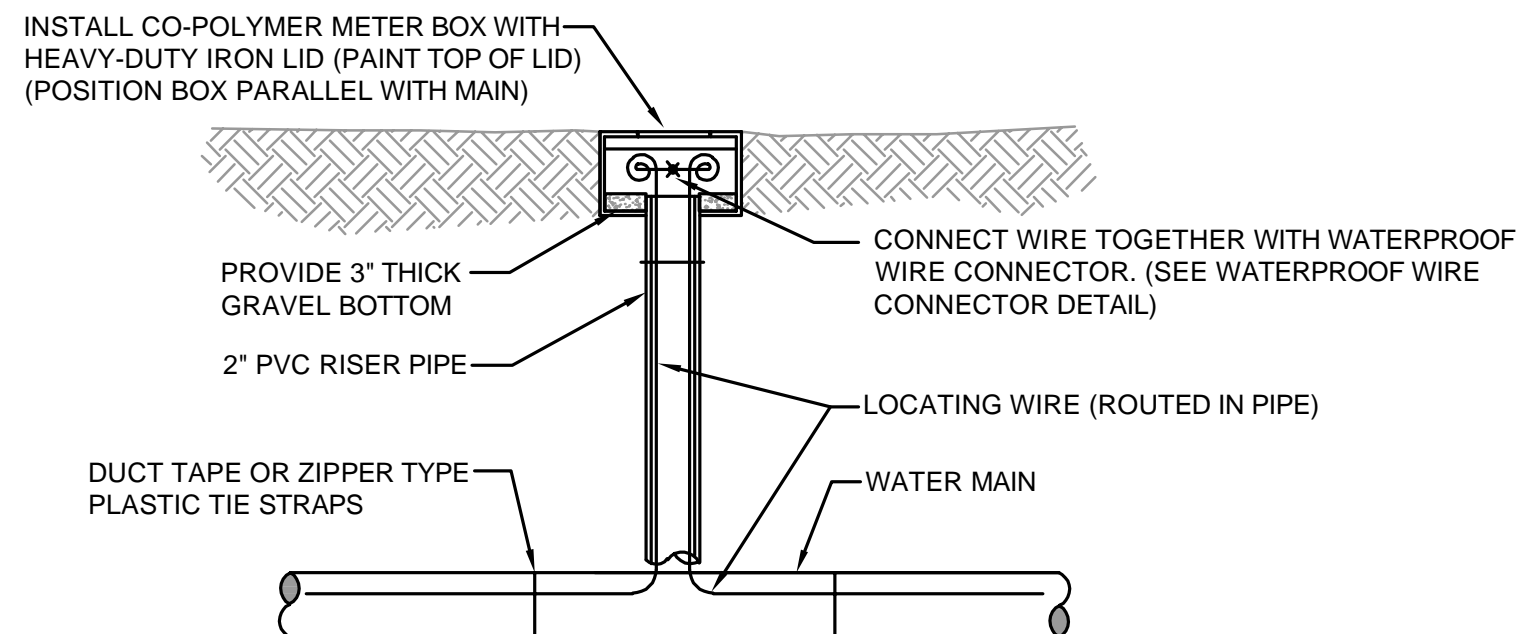
PLUGGED DEAD END USING MECHANICAL RESTRAINTS

JANUARY 2024

PLATE W-37



LOCATE WIRE BOX UTILIZING VALVE BOX



LOCATE WIRE BOX UTILIZING METER BOX

LOCATE WIRE BOX

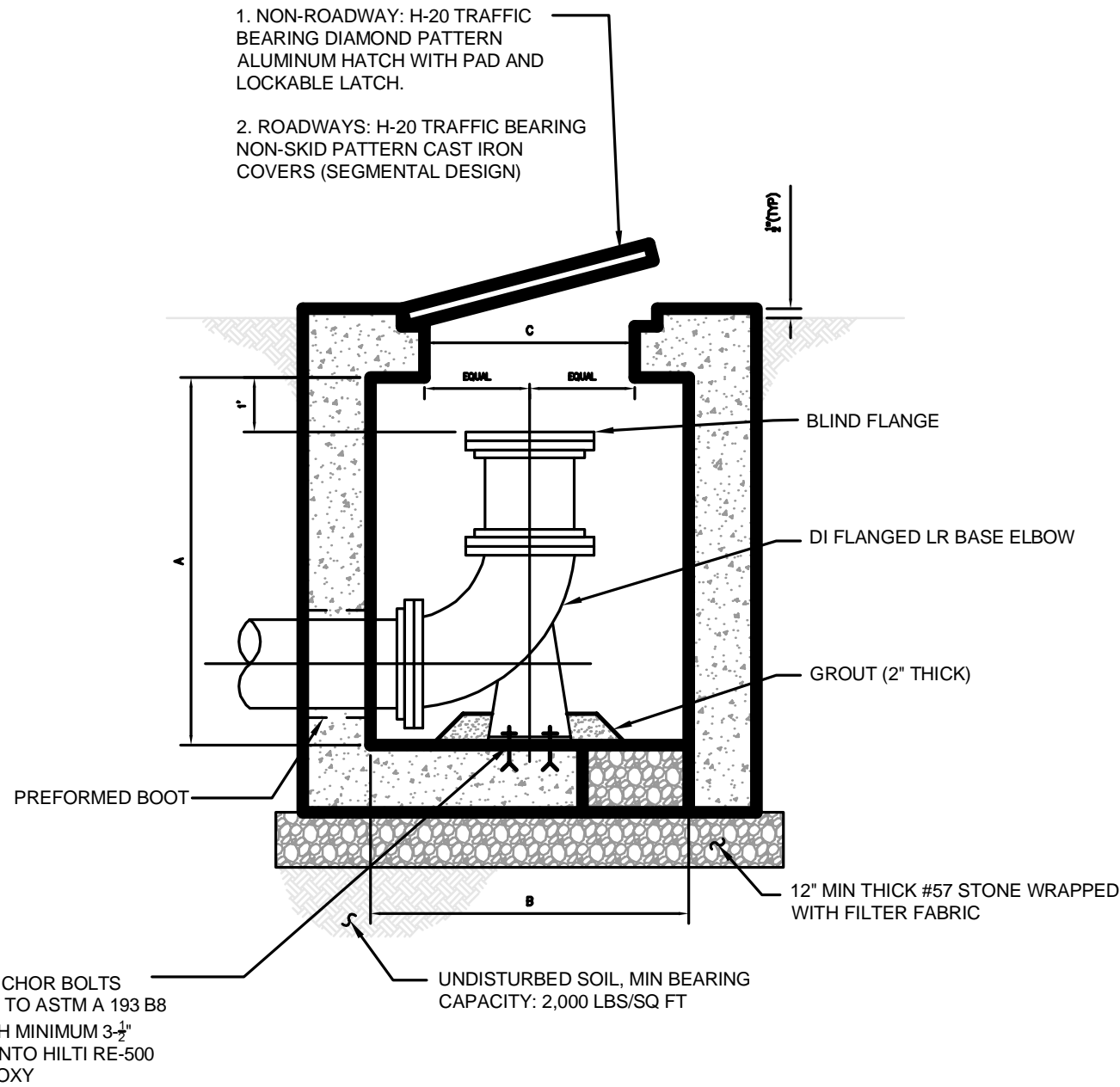
JANUARY 2024

PLATE W-44B

England-Thims & Miller, Inc. 14776 Old St. Augustine Road Jacksonville, FL 32218 TEL: (904) 646-4444 FAX: (904) 646-4445 CA - 0002384 LC - 000316		VISION • EXPERIENCE • RESULTS		REVISIONS	
		NO.	BY	DATE	
THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE JEA. WE TAKE NO EXCEPTION TO THE DESIGN	DESIGNER:	DESIGN ENGINEER:	66569		
	DRAWN BY:	JOHN ZACHARY BRECHT			
	DATE:	FLORIDA REGISTRATION NO.			
	CHECKED BY:				
PROJ. NO. 19-239-01-055	DATE: JANUARY 2024	SCALE: AS NOTED			
NO. SHEETS 6	SHEET NO. 5	DRAWING NO. 12E			

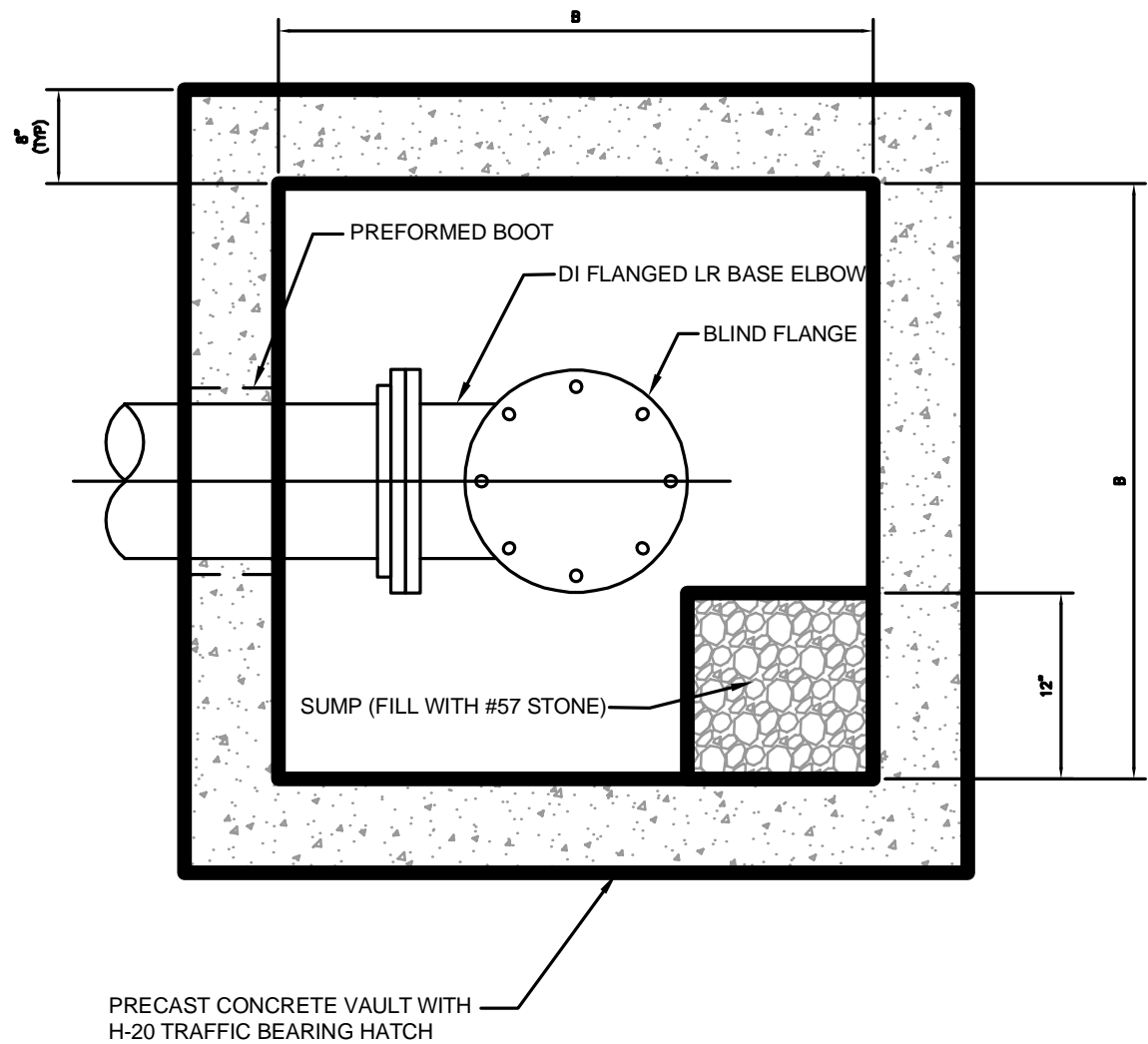
JEA STANDARD
WATER AND RECLAIMED DETAILS
WILDLIGHT AVENUE PHASE 4

JEA
Building Community



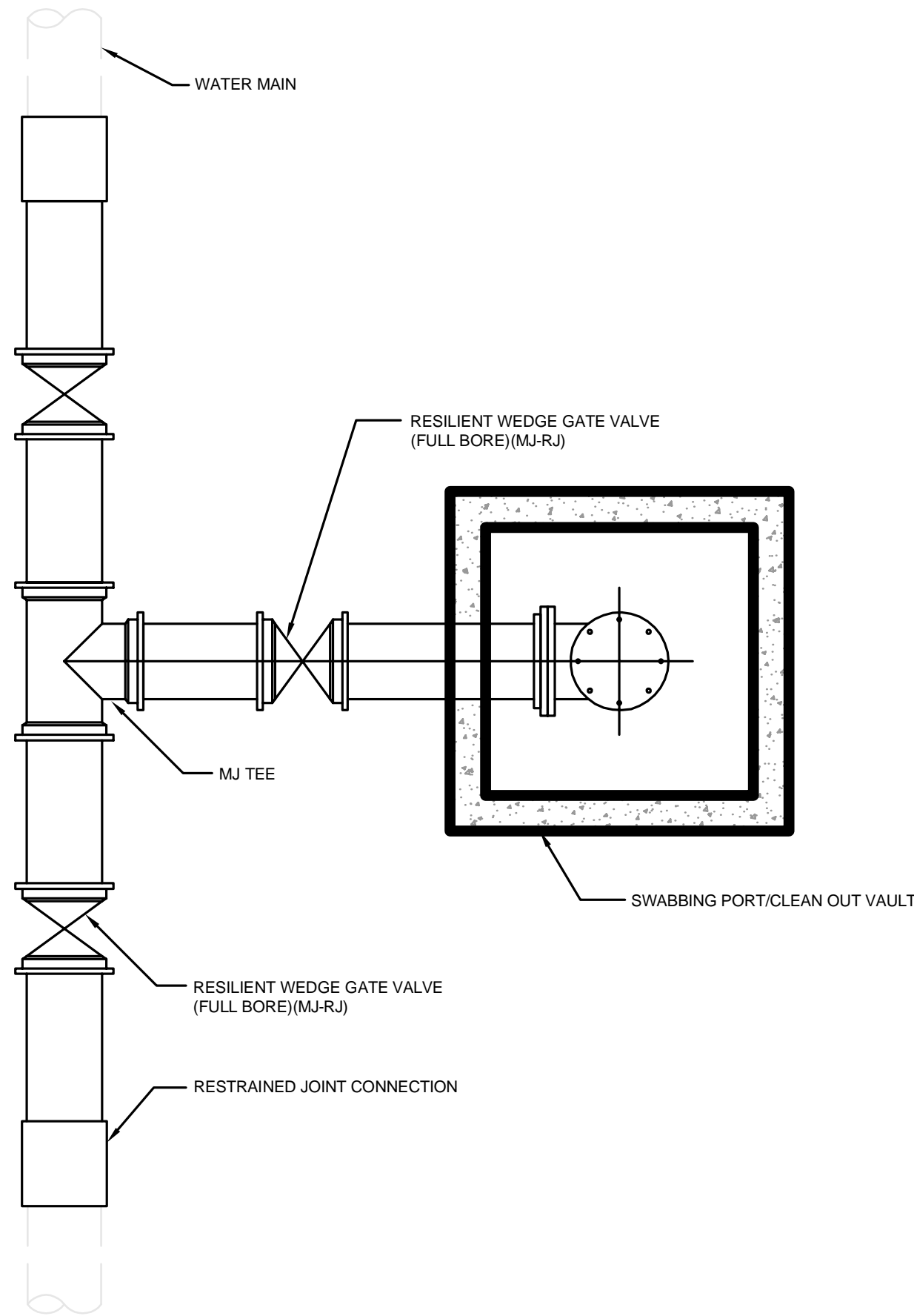
SWABBING PORT AND CLEAN OUT VAULT DETAIL - SECTION

JANUARY 2024 PLATE W-45



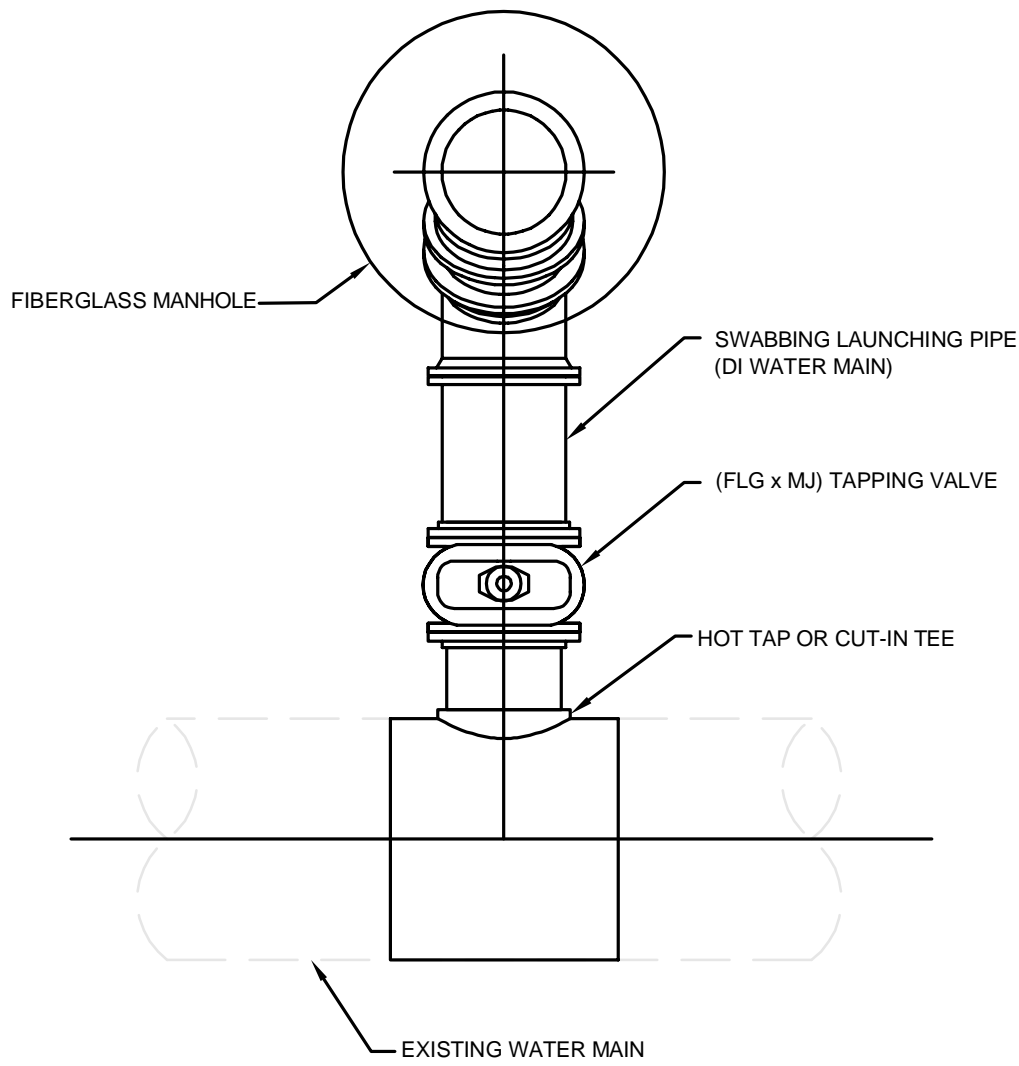
SWABBING PORT AND CLEAN OUT VAULT DETAIL - PLAN

JANUARY 2024 PLATE W-45A



SWABBING LAUNCHING STATION DETAIL FOR NEW WATER MAIN UP TO 24"

JANUARY 2024 PLATE W-45B

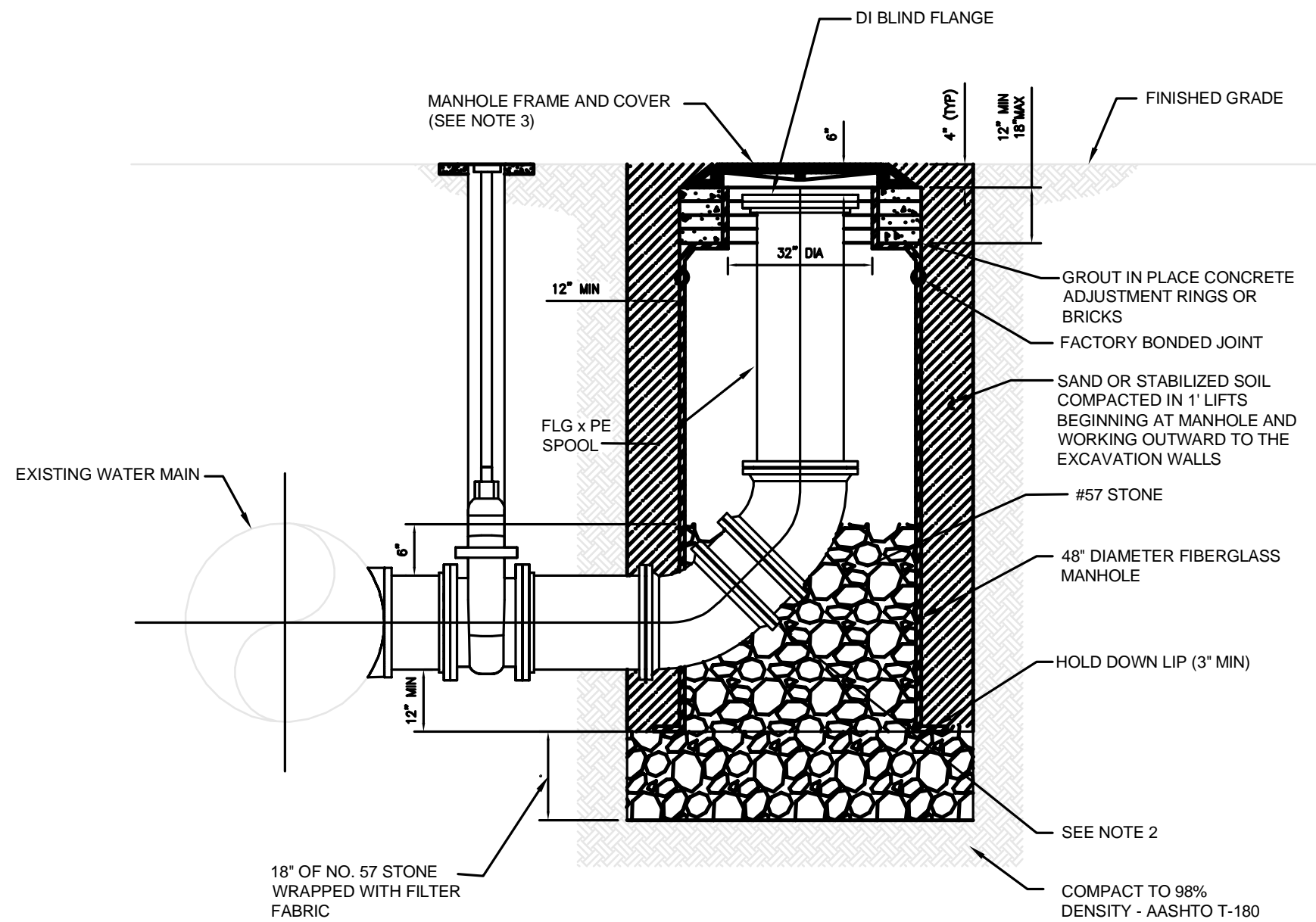


NOTES:

- FOR HOT TAP CONNECTIONS ON EXISTING WATER MAINS 10" DIAMETER AND GREATER, DIAMETER OF TAPPING VALVE AND PIG LAUNCHING PIPE SHALL BE ONE NOMINAL SIZE LESS THAN EXISTING WATER MAIN.

SWABBING PIG LAUNCHING STATION DETAIL FOR WATER MAINS UP TO 24" - PLAN

JANUARY 2024 PLATE W-45C



NOTES:

- PROVIDE ALL MATERIALS IN ACCORDANCE TO JEA WATER AND WASTEWATER STANDARD SPECIFICATIONS.
- USE TWO VERTICAL 45 DEGREE MJ BENDS OR LONG RADIUS 90 DEGREE MJ BEND.
- PROVIDE STANDARD JEA FRAME AND COVER.
- RESTRAIN ALL JOINTS.

RETROFIT SWABBING LAUNCHING STATION DETAIL FOR WATER MAINS UP TO 24" - SECTION

JANUARY 2024 PLATE W-45D

England, Thims & Miller, Inc.
14776 Old St. Augustine Road
Jacksonville, FL 32228
TEL: (904) 646-4444
FAX: (904) 646-4445
CA - 0000284 LC - 0000316

ETM
VISION • EXPERIENCE • RESULTS

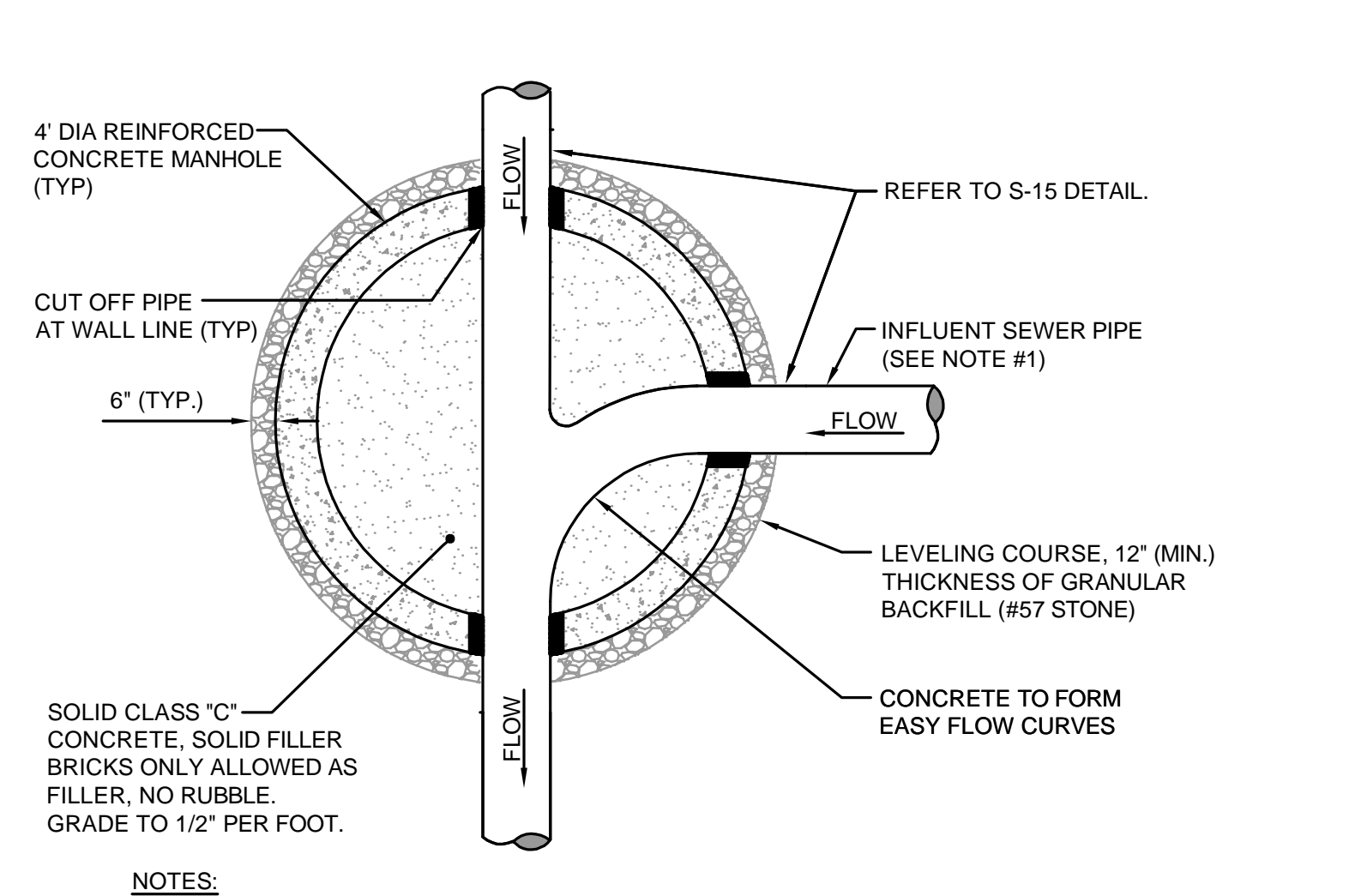
THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE JEA. WE TAKE NO EXCEPTION TO THE DESIGN

DESIGNER		DESIGN ENGINEER		REVISIONS	
DESIGNED BY:	DATE:	JOHN ZACHARY BRECHT	DATE:	NO.	BY
CHECKED BY:	DATE:	FLORIDA REGISTRATION NO.	DATE:	4.	
		66559		3.	
				2.	
				1.	

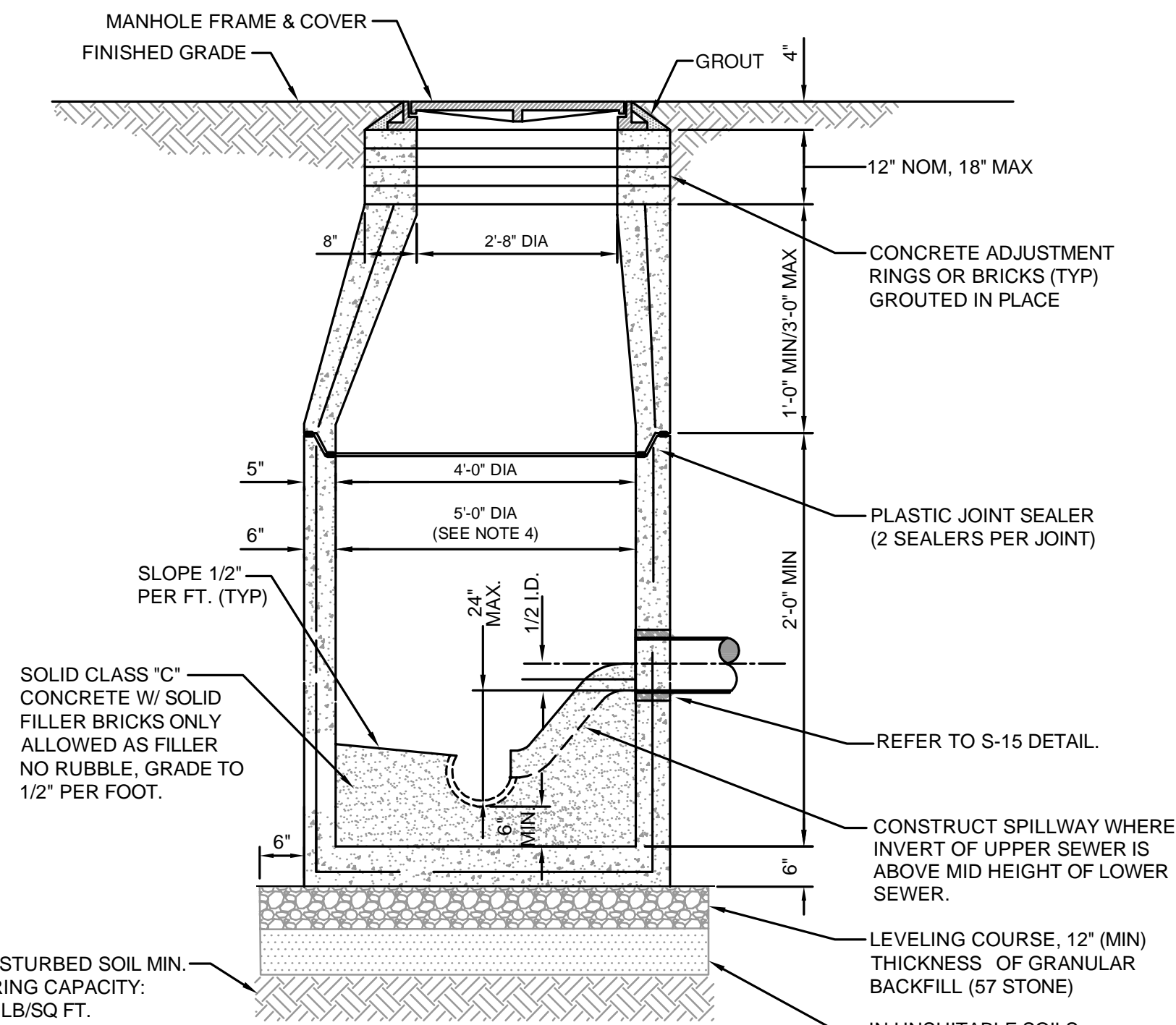
PROJ. NO.	19-239-01-055	NO. SHEETS	6
DATE:	JANUARY 2024	SHEET NO.	6
SCALE:	AS NOTED	DRAWING NO.	12F

JEA STANDARD
WATER AND RECLAIMED DETAILS
WILDLIGHT AVENUE PHASE 4

JEA
Building Community



PLAN VIEW (S-3)
(FOR SECTION VIEW SEE S-2)



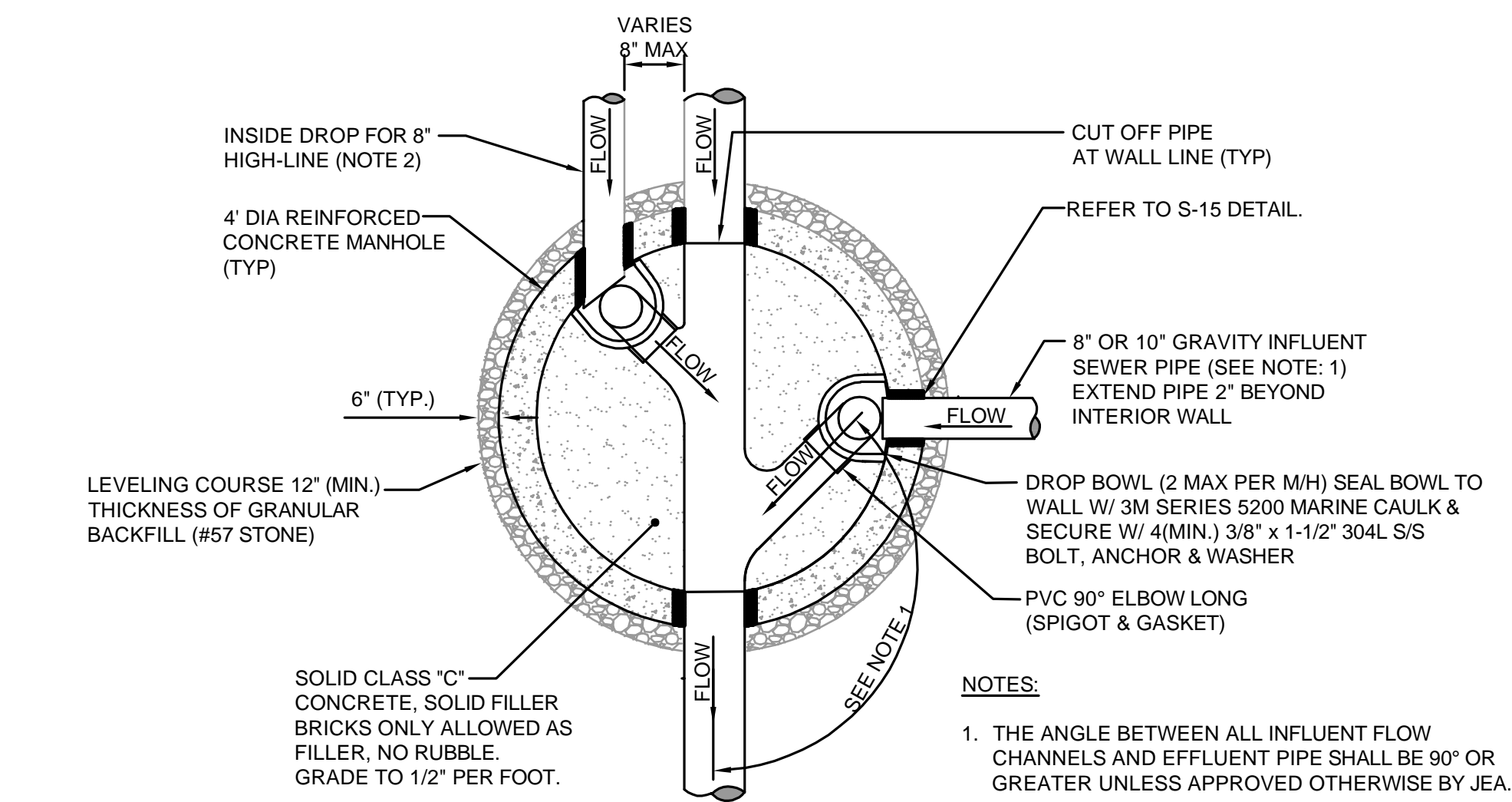
SECTION VIEW (S-2)
(FOR PLAN VIEW SEE S-3)

- NOTES:
1. PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478 WITH 4000 LB. CONC., TYPE II CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
 2. THE INTERIOR AND EXTERIOR OF MANHOLE AND ADJUSTING RINGS SHALL BE GIVEN TWO COATS OF BITUMINOUS WATERPROOFING MATERIAL.
 3. IF SPECIALTY LINER IS TO BE INSTALLED ON INSIDE SURFACE OF MANHOLE, THE BITUMINOUS WATERPROOFING MATERIAL SHALL BE OMITTED ON THE INSIDE.
 4. JUNCTION MANHOLE (CLOSEST TO WETWELL) SHALL BE 5' DIA WITH SPECIALTY LINER.
 5. SEAL ALL EXTERIOR JOINTS PER PLATE S-17.
 6. IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS ML, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT A MIN.) AND BACKFILLED WITH AASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 12" (AT A MIN.) AND BACKFILL WITH GRANULAR BACKFILL (57 STONE).

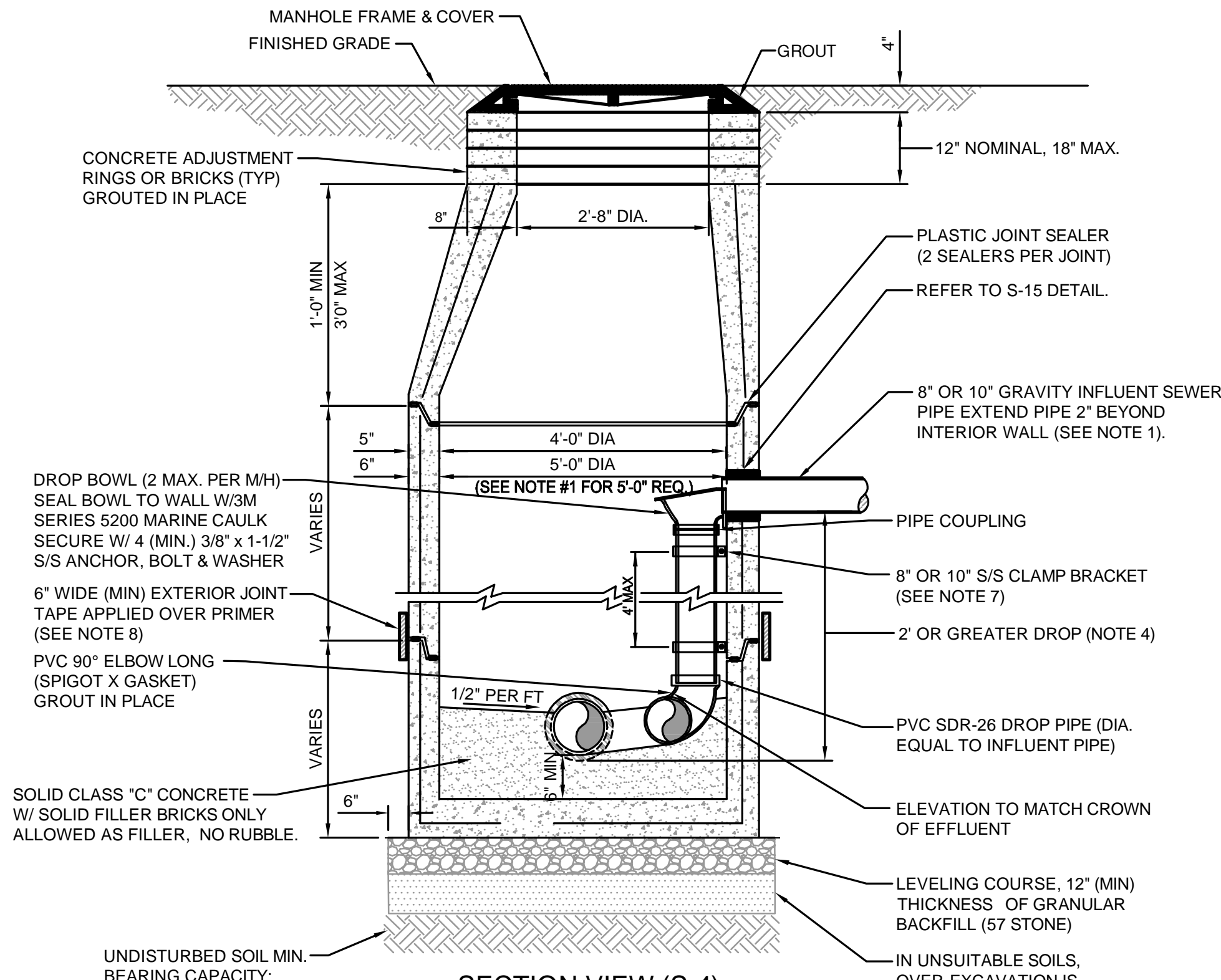
SANITARY SEWER TYPE "A" MANHOLE 8"-21" SEWERS

JANUARY 2024

PLATES S-2, S-3



PLAN VIEW (S-5)
(FOR SECTION VIEW SEE S-4)



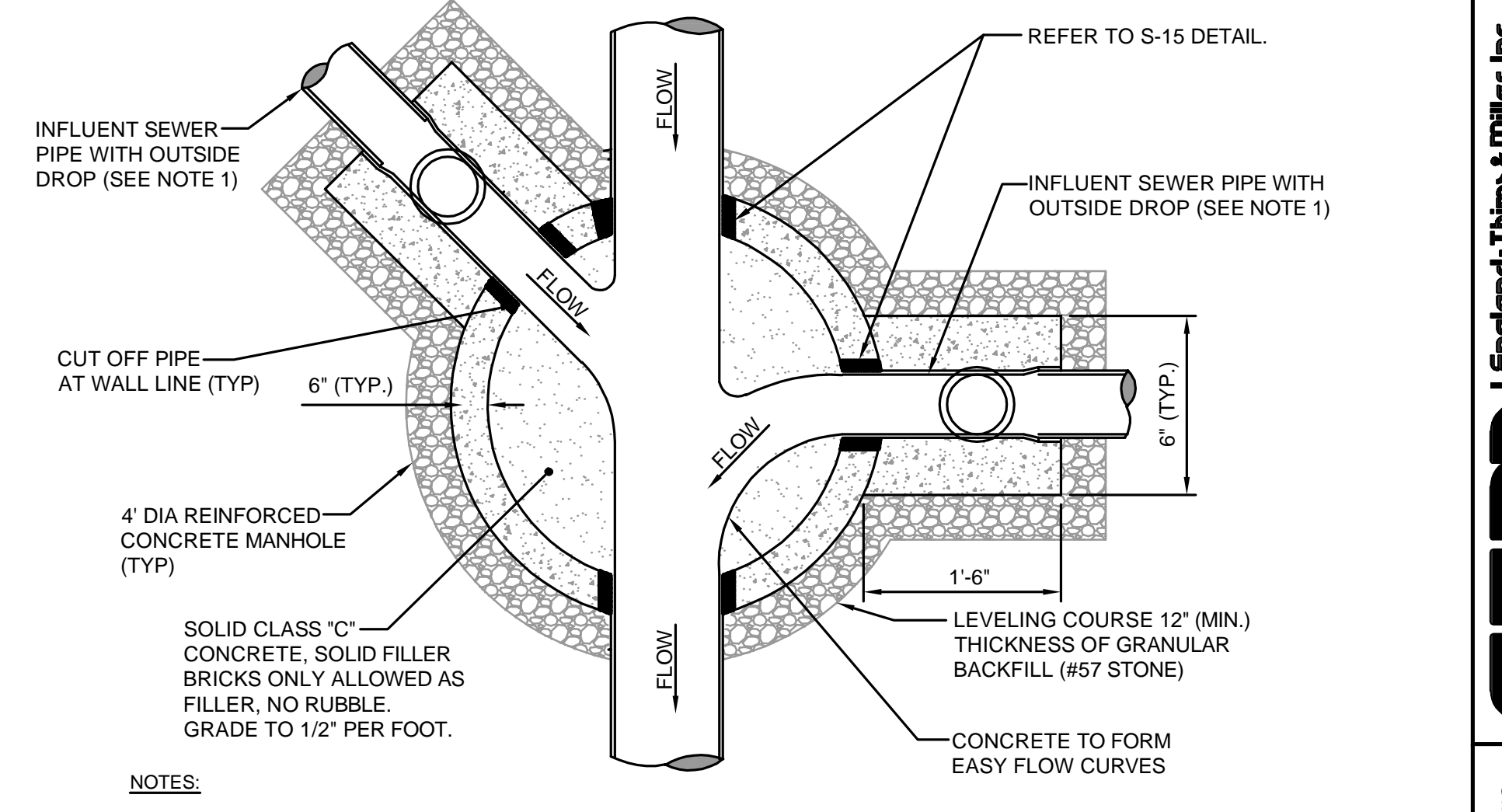
SECTION VIEW (S-4)
(FOR PLAN VIEW SEE S-5)

- NOTES:
1. THIS ASSEMBLY IS FOR 8" OR 10" GRAVITY INFLUENT LINES ONLY. NO DROPS ALLOWED FOR FORCE MAINS. MAXIMUM OF 2 INSIDE DROP BOWLS PER MANHOLE. A 5'-0" DIA. MANHOLE (6" THICK WALLS) IS REQUIRED IF TWO INSIDE DROPS ARE CONSTRUCTED WITH ONE OR BOTH BEING 10" SIZE. DROP BOWL BY RELINER OR APPROVED EQUAL REQUIRED. THE INSIDE DROP FOR AN 8" HIGH-LINE SHALL BE CONSTRUCTED SIMILAR TO ABOVE (SEE PLATE S-5).
 2. PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478 WITH 4000 LB. CONC., TYPE II CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
 3. THE INTERIOR AND EXTERIOR OF MANHOLE AND THE INTERIOR OF ADJUSTMENT RINGS SHALL BE GIVEN TWO COATS OF BITUMINOUS WATERPROOFING MATERIAL.
 4. TYPE "B" MANHOLE MUST BE USED FOR 2' OR GREATER INFLUENT PIPE DROPS.
 5. THE DROP BOWL ASSEMBLY SHALL BE INSTALLED PRIOR TO APPLICATION OF SPECIALTY LINING MATERIAL.
 6. A TYPE "D" MANHOLE SHALL BE UTILIZED WHEN THREE OR MORE (2' OR GREATER) DROPS ARE INVOLVED OR WHEN INFLUENT PIPES AREA LARGER THAN 10" IN SIZE.
 7. ADJUSTABLE CLAMPING BRACKET (MIN. 2 PER DROP BOWL ASSY). 1-1/2" WIDE, 11 GA. W/ 3/8" DIA. 18-8 PINCH BOLTS AND NUTS. SECURE TO M/H WALL WITH (2) 3/8" X 1" BOLT, ANCHOR & WASHER PER BRACKET ASSY. ALL 304 OR 316 STAINLESS STEEL MATERIALS.
 8. SEAL ALL EXTERIOR JOINTS PER PLATE S-17.
 9. IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS ML, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT A MIN.) AND BACKFILLED WITH AASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 12" (AT A MIN.) AND BACKFILL WITH GRANULAR BACKFILL (57 STONE).

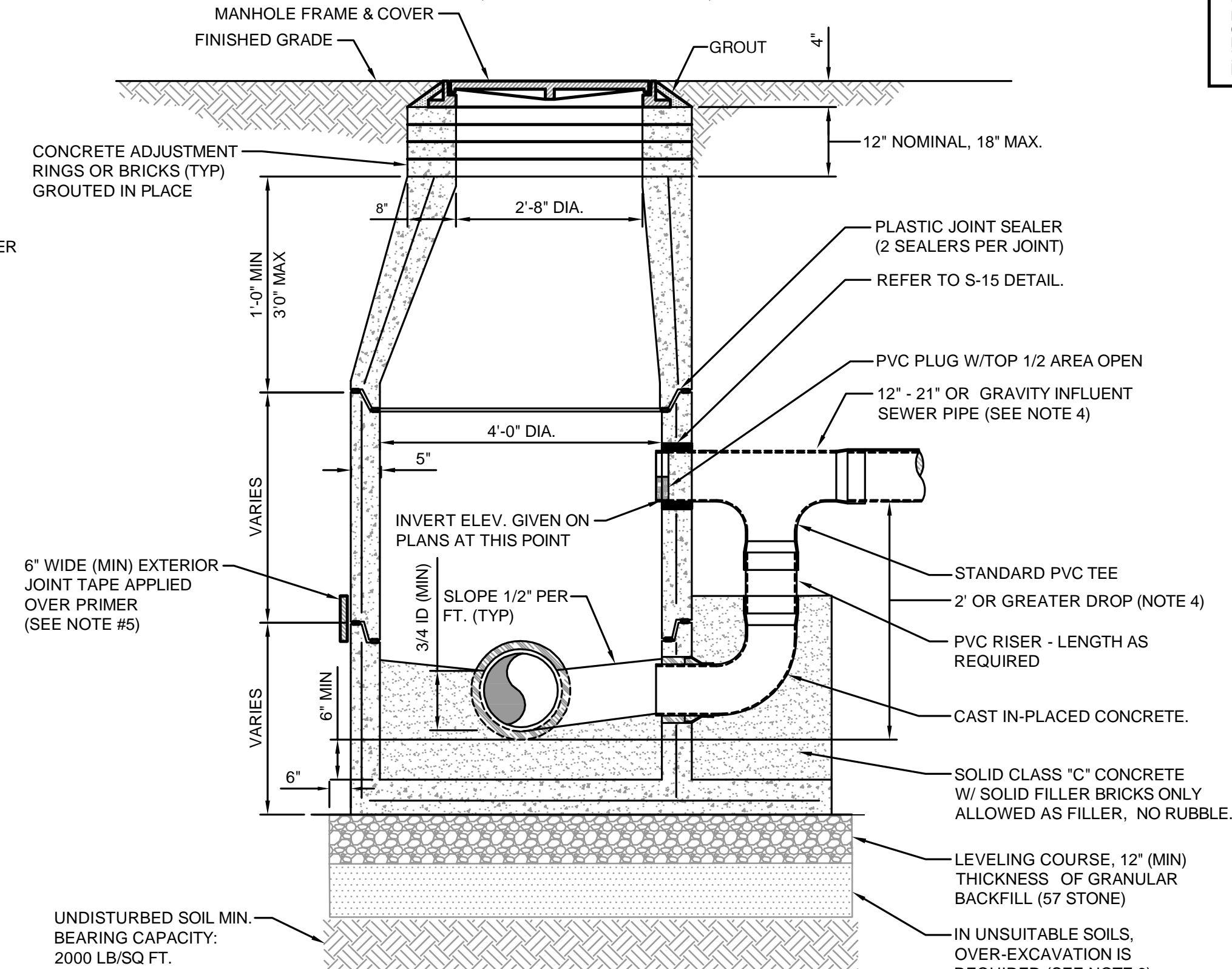
SANITARY SEWER TYPE "B" MANHOLE 8"-10" SEWERS

JANUARY 2024

PLATES S-4, S-5



PLAN VIEW (S-8)
(FOR SECTION VIEW SEE S-7)



SECTION VIEW (S-7)
(FOR PLAN VIEW SEE S-8)

- NOTES:
1. PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478 WITH 4000 LB. CONC., TYPE II CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
 2. THE INTERIOR AND EXTERIOR OF MANHOLE AND THE INTERIOR OF THE ADJUSTMENT RINGS SHALL BE GIVEN TWO COATS OF BITUMINOUS WATERPROOFING MATERIAL.
 3. IF SPECIALTY LINER IS TO BE INSTALLED ON INSIDE SURFACE OF MANHOLE, THE BITUMINOUS WATERPROOFING SHALL BE, OMITTED ON INSIDE.
 4. TYPE "D" MANHOLE SHALL BE USED FOR 12" OR LARGER INFLUENT PIPES W/ 2' OR GREATER INFLUENT DROP.
 5. SEAL ALL EXTERIOR JOINTS PER PLATE S-17.
 6. IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS ML, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT A MIN.) AND BACKFILLED WITH AASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 12" (AT A MIN.) AND BACKFILL WITH GRANULAR BACKFILL (57 STONE).

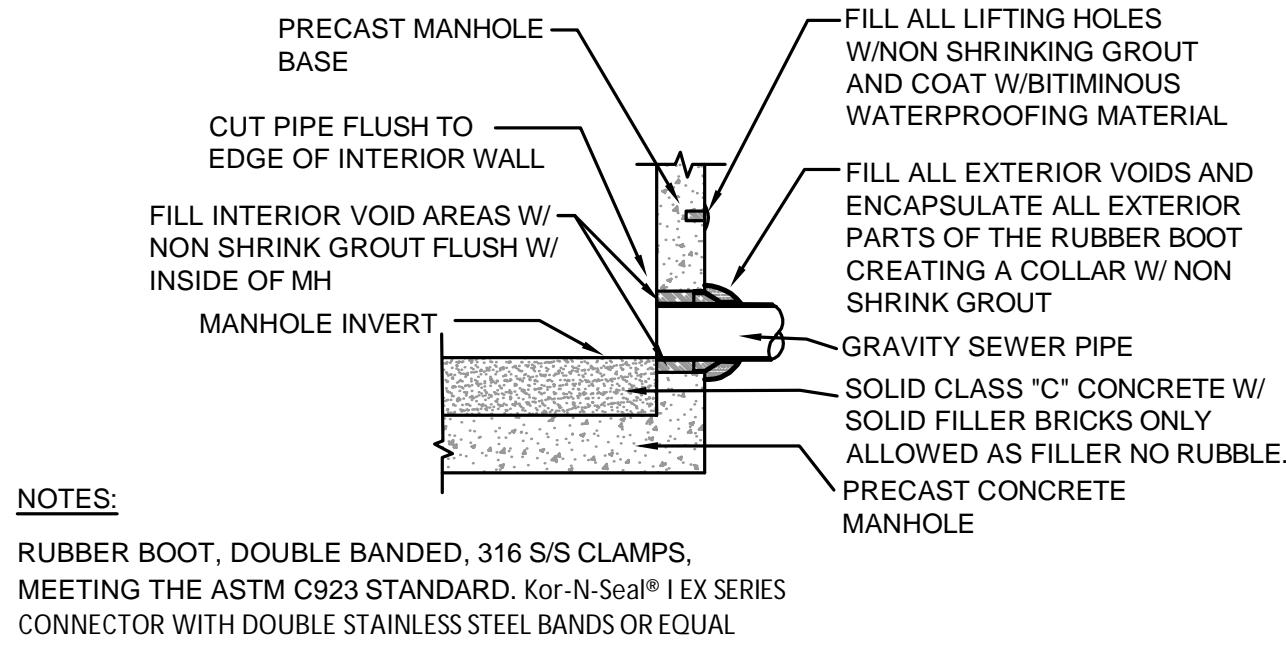
SANITARY SEWER TYPE "D" MANHOLE 12"-21" SEWERS

JANUARY 2024

PLATES S-7, S-8

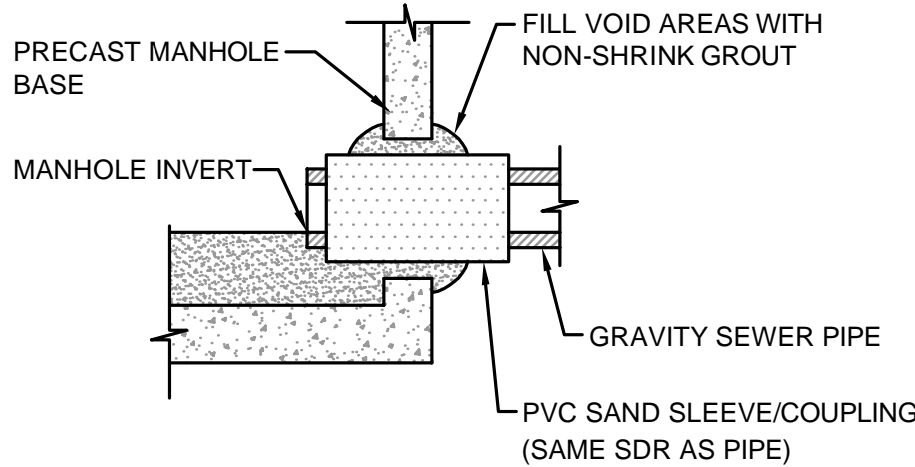
THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE J.E.A. WE TAKE NO EXCEPTION TO THE DESIGN		<div>DESIGNER: DRAWN BY: DATE: CHECKED BY: DATE:</div>		<div>DESIGN ENGINEER: JOHN ZACHARY BRECHT FLORIDA REGISTRATION NO. 66569</div>		<div>NO. BY DATE</div> <div>4.</div> <div>3.</div> <div>2.</div> <div>1.</div>		<div>REVISIONS</div>		<div>England - Thims & Miller, Inc.</div> <div>14775 Old St. Augustine Road Jacksonville, FL 32228 TEL: (904) 642-3990 FAX: (904) 646-3485 CA - 0002564 LC - 000316</div>	
										<div>ETM</div> <div>VISION • EXPERIENCE • RESULTS</div>	
<div>BLK.</div>											
NO. SHEETS 5		PROJ. NO. 19-239-01-055		JEA STANDARD SANITARY SEWER DETAILS				<div></div>			
SHEET NO. 1		DATE: JANUARY 2024									
DRAWING NO. 13A		SCALE: AS NOTED									

I:\2019\19-239\19-239-01 - Royonier Work\19-239-01-055 Wildlight Avenue Extension\LandDev\Design\Plots\JEA-SDET-19-239-01-055.dwg
Current Layout Tab = JEA SAN02
Fri Jun 28, 2024 - 09:08



RUBBER BOOT

(FOR NEW M/H CONSTRUCTION ONLY, MAXIMUM DEPTH 15FT)



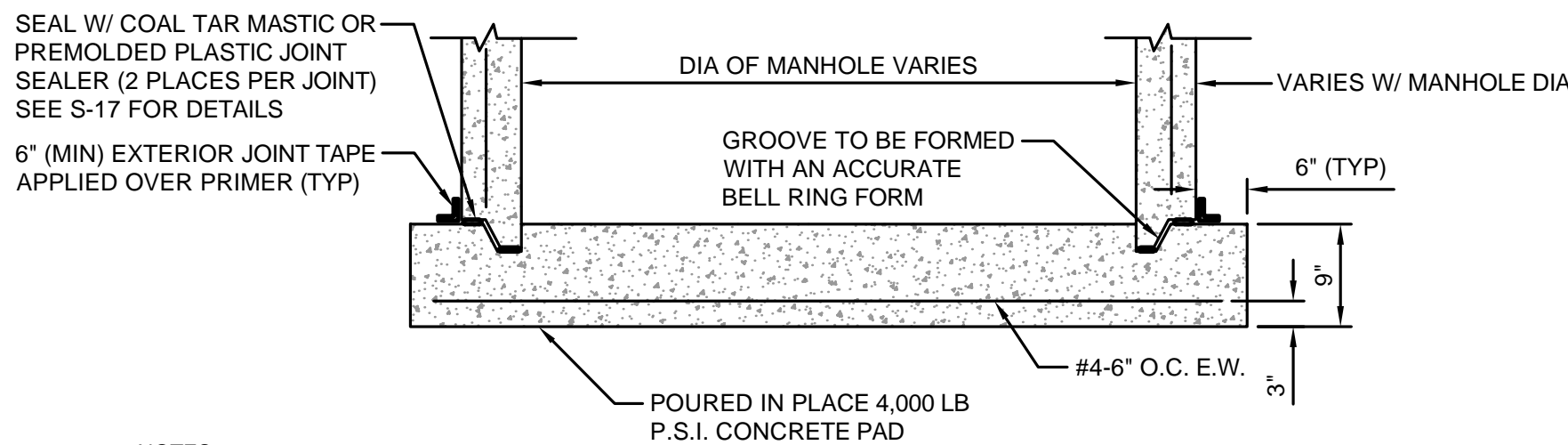
PVC SAND SLEEVE

(FOR EXISTING AND NEW M/H CONSTRUCTION)

CONCRETE AND POLYMER MANHOLE PIPE CONNECTION DETAILS

JANUARY 2024

PLATE S-15

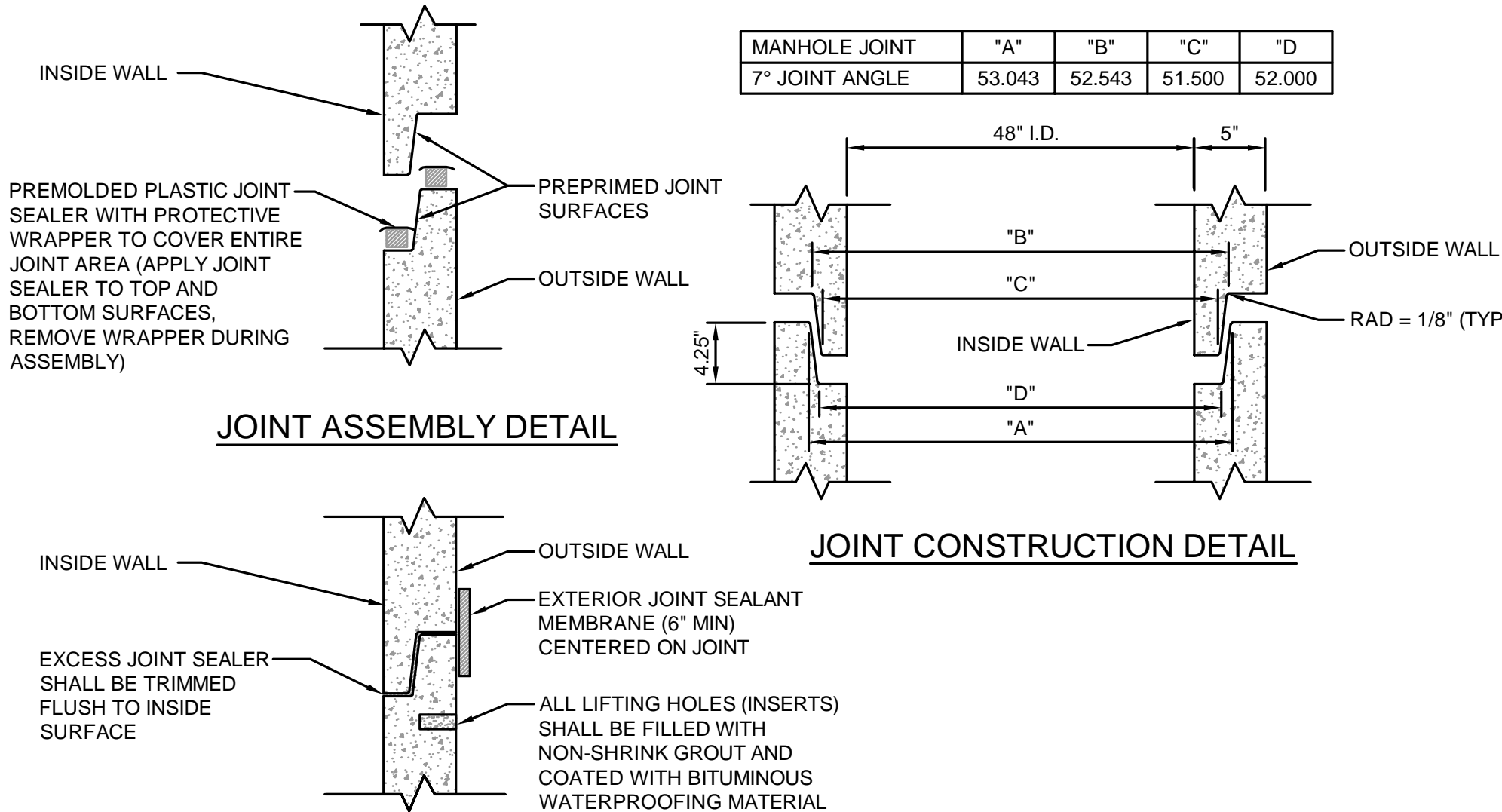


MANHOLE BOTTOM

MANHOLE BOTTOM DETAILS

JANUARY 2024

PLATE S-15A



COMPLETED JOINT DETAIL

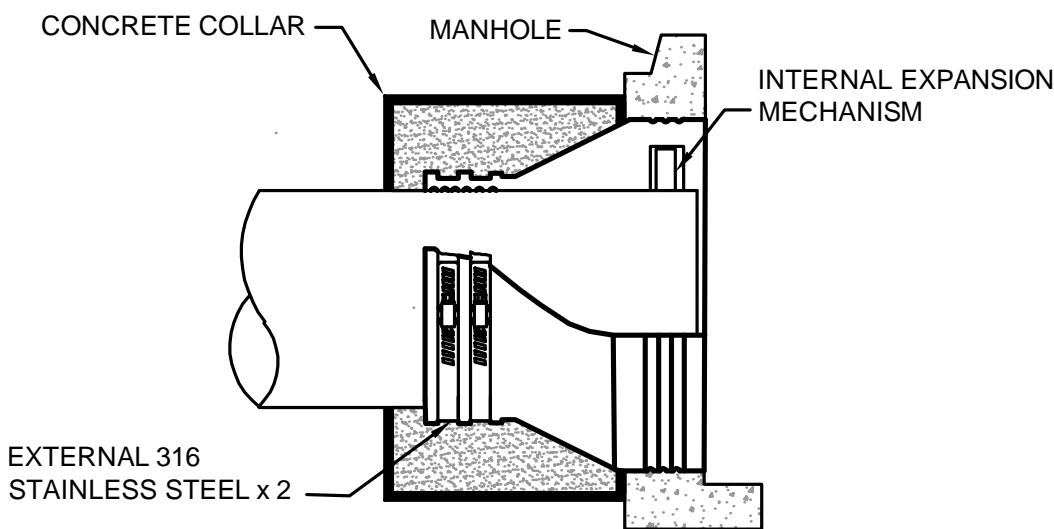
NOTES:

ALL EXTERIOR MANHOLE JOINTS, INCLUDING BASE, RISER, AND CONE SECTIONS, AS WELL AS ADJUSTING RINGS TO BE SEALED IN ACCORDANCE WITH WATER AND WASTEWATER STANDARDS, SECTION 427 - WASTEWATER MANHOLES

PRECAST SEWER MANHOLE JOINT DETAIL

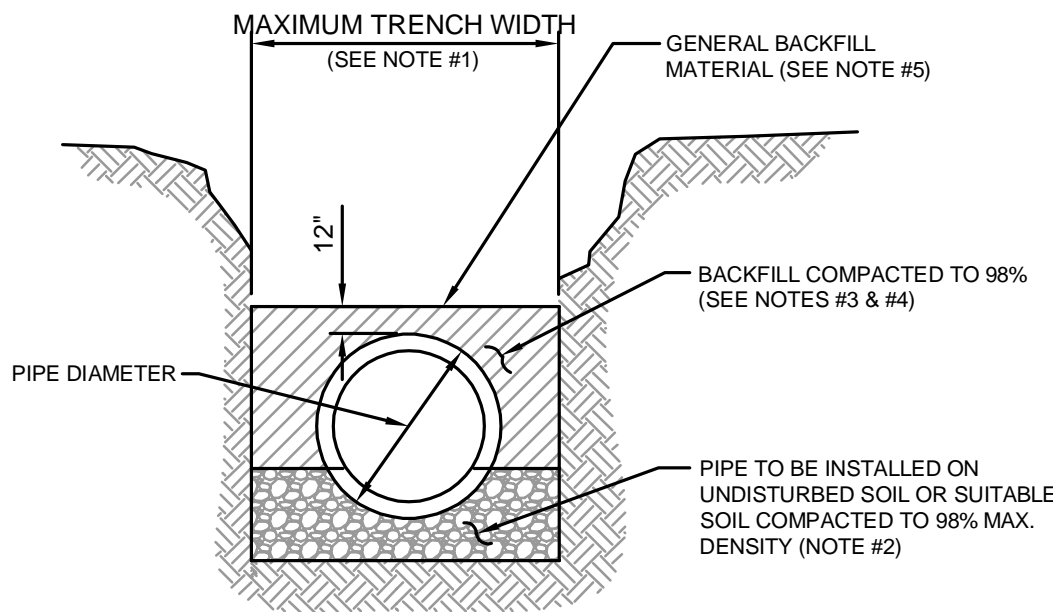
JANUARY 2024

PLATE S-17



RUBBER BOOT DETAIL

(FOR EXISTING AND NEW M/H CONSTRUCTION)



TYPICAL TRENCH

NOTES:

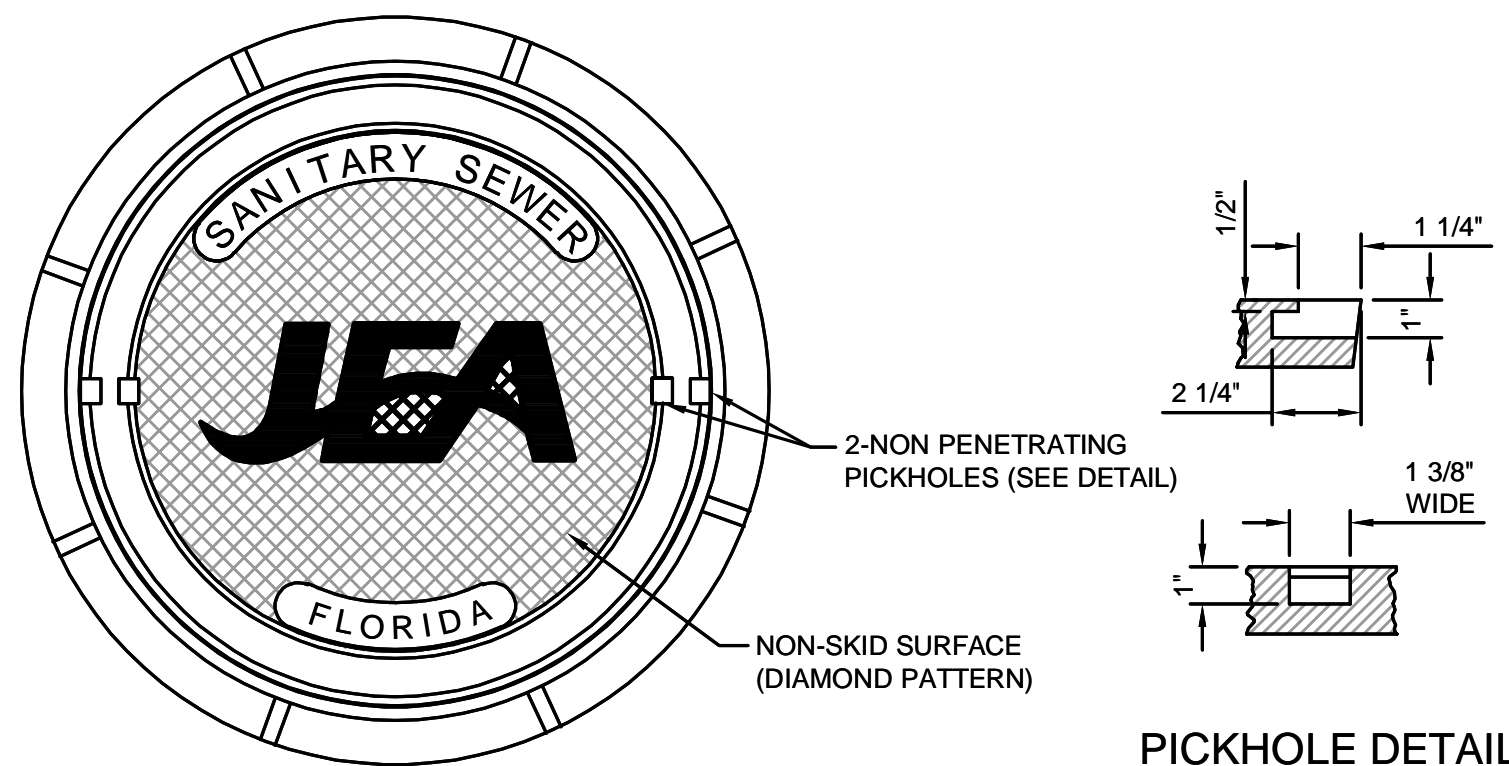
- TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4)) TO DETERMINE MAXIMUM PAYLINE WIDTHS.
- BELL HOLE SHALL BE DUG TO PERMIT THE ENTIRE STRAIGHT BARREL OF THE PIPE TO REST ON THE UNDISTURBED TRENCH BOTTOM. BOULDERS OR LOOSE ROCKS LARGER THAN 3/4 INCH IN SIZE WILL NOT BE PERMITTED IN BACKFILL UP TO 1 FOOT ABOVE THE TOP OF THE PIPE.
- BACK FILL MATERIAL UP TO A LEVEL OF 1 FOOT OVER THE PIPE SHALL CONSIST OF AASHTO CLASS A-3 SOIL (SUITABLE SOIL) AND SHALL EXCLUDE CLAY MATERIALS AND LOOSE ROCKS LARGER THAN 3/4 INCH SIZE.
- BACKFILL MATERIAL UP TO A LEVEL 1 FOOT OVER THE TOP OF PIPE OR BOTTOM OF STRUCTURES SHALL BE PLACED IN 6 INCH COMPACTED THICKNESS LAYERS AND SHALL BE COMPACTED TO 98% OF ITS MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D1557.
- SEE " EXCAVATION AND EARTHWORK", SECTION 408 FOR ADDITIONAL REQUIREMENTS INCLUDING REMOVAL AND REPLACEMENT OF UNSUITABLE SOILS, DEWATERING, COMPACTION REQUIREMENTS AND DENSITY TESTING OF COMPACTED SOILS.

OPEN CUT TRENCH FOR PRESSURE PIPE

JANUARY 2024

IN CITY RIGHT -OF-WAY

PLATE W-42



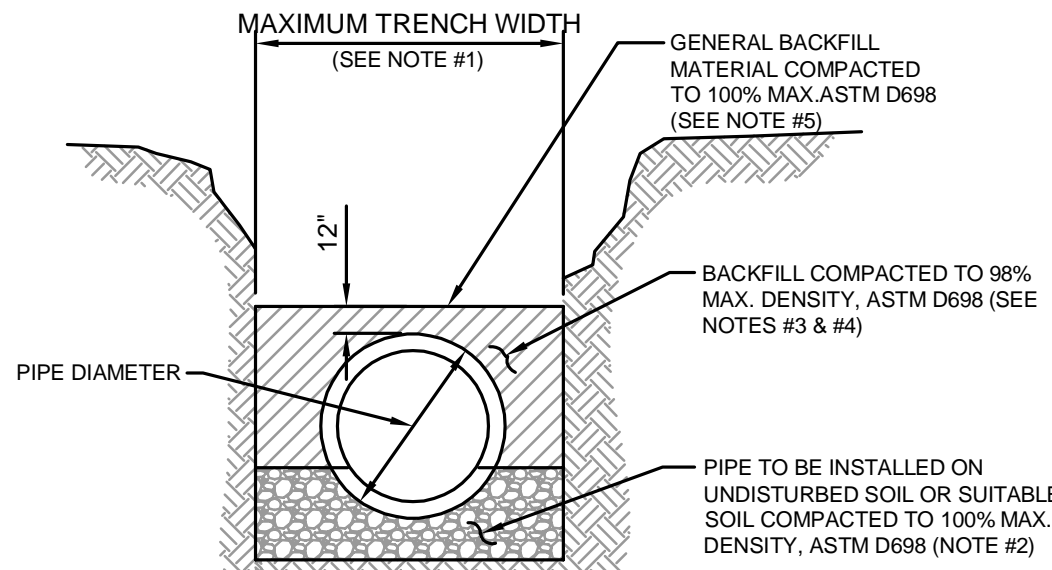
COVER

RING

GROOVE & GASKET DETAIL

JANUARY 2024

PLATE S-1



TYPICAL TRENCH

NOTES:

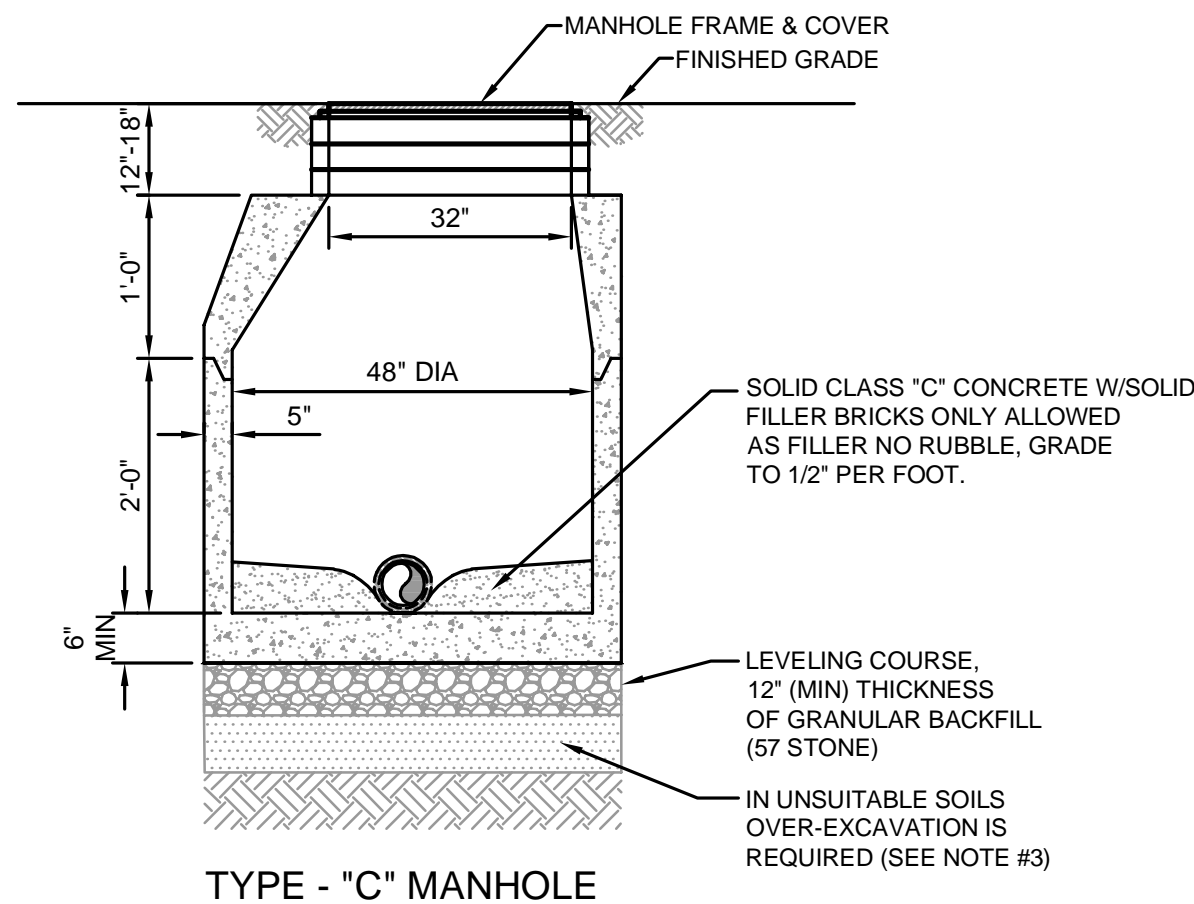
- TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4)) TO DETERMINE MAXIMUM PAYLINE WIDTHS.
- BELL HOLE SHALL BE DUG TO PERMIT THE ENTIRE STRAIGHT BARREL OF THE PIPE TO REST ON THE UNDISTURBED TRENCH BOTTOM. BOULDERS OR LOOSE ROCKS LARGER THAN 3/4 INCH IN SIZE WILL NOT BE PERMITTED IN BACKFILL UP TO 1 FOOT ABOVE THE TOP OF THE PIPE.
- BACK FILL MATERIAL UP TO A LEVEL OF 1 FOOT OVER THE PIPE SHALL CONSIST OF AASHTO CLASS A-3 SOIL (SUITABLE SOIL) AND SHALL EXCLUDE CLAY MATERIALS AND LOOSE ROCKS LARGER THAN 3/4 INCH SIZE.
- BACKFILL MATERIAL UP TO A LEVEL 1 FOOT OVER THE TOP OF PIPE OR BOTTOM OF STRUCTURES SHALL BE PLACED IN 6 INCH COMPACTED THICKNESS LAYERS AND SHALL BE COMPACTED TO 100% OF ITS MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D698.
- SEE " EXCAVATION AND EARTHWORK", SECTION 408 FOR ADDITIONAL REQUIREMENTS AND EXCEPTIONS INCLUDING REMOVAL AND REPLACEMENT OF UNSUITABLE SOILS, DEWATERING, COMPACTION REQUIREMENTS AND DENSITY TESTING OF COMPACTED SOILS.

OPEN CUT TRENCH FOR PRESSURE PIPE

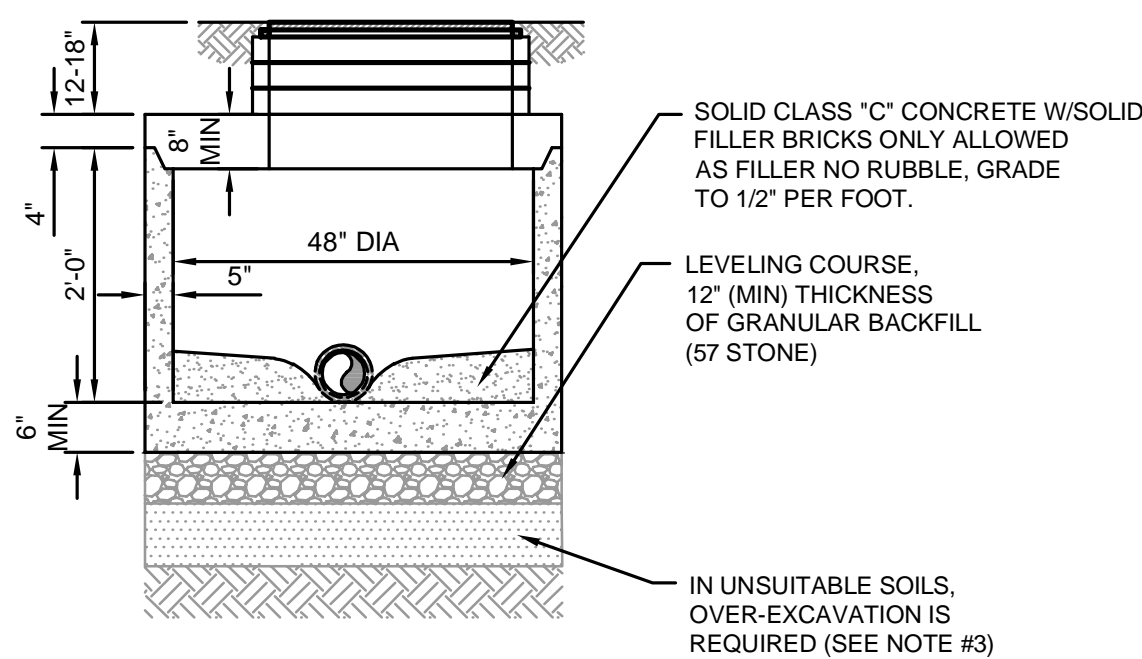
JANUARY 2024

IN STATE ROAD RIGHT -OF-WAY

PLATE W-42A



TYPE - "C" MANHOLE



TYPE - "C" MANHOLE WITH FLAT TOP

SECTION VIEWS

NOTES:

- PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478 WITH 4000 LB. CONC., TYPE II CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
- THE INTERIOR AND EXTERIOR OF MANHOLE AND INTERIOR OF ADJUSTMENT RINGS SHALL BE GIVEN TWO COAT OF BITUMINOUS WATERPROOFING MATERIAL.
- IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS ML, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT A MIN.) AND BACKFILLED WITH AASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 12" (AT A MIN.) AND BACKFILL WITH GRANULAR BACKFILL (57 STONE).
- SEAL ALL EXTERIOR JOINTS PER PLATE S-17.

SANITARY SEWER TYPE "C" MANHOLE 8"-21" SEWERS

JANUARY 2024

PLATE S-6

England, Thims & Miller, Inc.
14776 Old St. Augustine Road
Jacksonville, FL 32228
TEL: (904) 646-4444
FAX: (904) 646-4445
CA - 0000284 LC - 0000316

ETM
VISION • EXPERIENCE • RESULTS

THESE DETAILS AS SHOWN ON THIS
DRAWING ARE BY THE JEA. WE TAKE
NO EXCEPTION TO THE DESIGN

DESIGNER:
DRAWN BY:
DATE:
CHECKED BY:
DATE:

DESIGN ENGINEER:
JOHN ZACHARY BRECHT
FLORIDA REGISTRATION NO.
66569

JEA
Building Community

JEA STANDARD
SANITARY SEWER DETAILS
WILDLIGHT AVENUE PHASE 4

PROJ. NO. 19-239-01-055
DATE: JANUARY 2024
SCALE: AS NOTED

NO. SHEETS 5
SHEET NO. 2
DRAWING NO. 13B



1. IF EXISTING CONFLICT PIPE IS A WATER OR RECLAIMED WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSLINGS.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
3. LOCATING WIRE REQUIRED: SEE DETAIL S-49.
4. THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREAS, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS PRE-APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.
5. THE SOILS BETWEEN THE MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.

JANUARY 2024

PLATE S-39



1. TO MARK THE LOCATION OF THE 6" PLUG FOR NEW SERVICE: FOR PROJECTS WHERE NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER IS REQUIRED FOR ALL LATERALS WHICH ARE "NOT" IN USE". FOR NEW DEVELOPMENT AREAS WHERE THE SEWER LATERAL IS "NOT IN USE", A LANDSCAPE TIMBER OR 3x3 MIN. P.T. POST (TOP PAINTED GREEN) SHALL BE INSTALLED. WHERE REQUIRED BY JEA OR NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER SHALL BE INSTALLED TO MARKER SHALL ALSO BE INSTALLED.
2. THE MINIMUM SIZE OF ALL HOUSE LATERALS SHALL BE 6 INCHES. THE MAXIMUM LENGTH OF A HOUSE LATERAL SHALL BE 60 FEET (LENGTH BETWEEN SEWER MAIN OR MANHOLE TO CUSTOMERS PROPERTY LINE).
3. SEE MEASUREMENT AND PAYMENT SECTION FOR MAXIMUM PAYMENT WIDTHS.
4. ALL GRAVITY SEWER MAINS AND ASSOCIATED SEWER LATERAL PIPE AND FITTINGS (INCLUDING THE TEE-WYE FITTING) SHALL BE PVC SDR-26.
5. UNLESS APPROVED OTHERWISE BY A JEA O&M MANAGER, NO GRAVITY SEWER MAIN WITH SEWER SERVICE LATERALS SHALL BE CONSTRUCTED WITH A "DEPTH OF CUT" GREATER THAN 12 FEET.
6. SEWER SERVICE LATERALS ASSOCIATED WITH GRAVITY SEWER MAINS WHICH ARE DEEPER THAN 12 FEET, MUST BE ROUTED TO A GRAVITY SEWER HIGH-LINE, A MANHOLE OR OTHER JEA APPROVED METHOD.
7. THE SEWER SERVICE LATERAL SHALL BE CONSTRUCTED AT A DEPTH TO ALLOW A GRAVITY CONNECTION BY THE CUSTOMER, WHERE POSSIBLE (CONTINGENT UPON MEETING THE CUSTOMER'S ON-SITE CONDITIONS AND LOCAL CONSTRUCTION STANDARDS). A LATERAL REQUIRING MORE THAN 60" OF COVER MUST BE APPROVED, PRIOR TO CONSTRUCTION, BY JEA.

HOUSE LATERAL - SECTION VIEW

JANUARY 2024

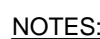
PLATE S-20



1. IF EXISTING CONFLICT PIPE IS A WATER OR RECLAIMED WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSINGS.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
3. LOCATING WIRE REQUIRED: SEE DETAIL S-49.
4. THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREAS, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS PRE-APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.
5. THE SOILS BETWEEN THE MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.

JANUARY 2024

PLATE S-41



1. TO MARK THE LOCATION OF THE 6" PLUG FOR NEW SERVICE: FOR PROJECTS WHERE NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER IS REQUIRED FOR ALL LATERALS WHICH ARE "NOT" IN USE. FOR NEW DEVELOPMENT AREAS WHERE THE SEWER LATERAL IS "NOT IN USE", A LANDSCAPE TIMBER OR 3x3 MIN. P.T. POST (TOP PAINTED GREEN) SHALL BE INSTALLED. WHERE REQUIRED BY JEA OR NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER SHALL BE INSTALLED TO MARKER SHALL ALSO BE INSTALLED.
2. THE MINIMUM SIZE OF ALL HOUSE LATERALS SHALL BE 6 INCHES. THE MAXIMUM LENGTH OF A HOUSE LATERAL SHALL BE 60 FEET (LENGTH BETWEEN SEWER MAIN OR MANHOLE TO CUSTOMERS PROPERTY LINE).
3. NO SEWER SERVICE CONNECTIONS PERMITTED ON GRAVITY SEWER PIPE WHICH ARE 16" AND LARGER.
4. ALL GRAVITY SEWER MAINS AND ASSOCIATED SEWER LATERAL PIPE AND FITTINGS (INCLUDING THE TEE-WYE FITTING) SHALL BE PVC SDR-26.

HOUSE LATERAL - PLAN VIEW

JANUARY 2024

PLATE S-19



1. ALTERNATE GRADIENT FOR 6 INCH LATERAL SEWERS AT CONFLICTS WITH EXISTING UTILITIES.
2. FLATTER SLOPE MUST BE PRE-APPROVED BY JEA O&M MANAGER (ONLY) PRIOR TO CONSTRUCTION
3. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.

HOUSE LATERAL UNDER CONFLICT PIPE

JANUARY 2024

PLATE S-24



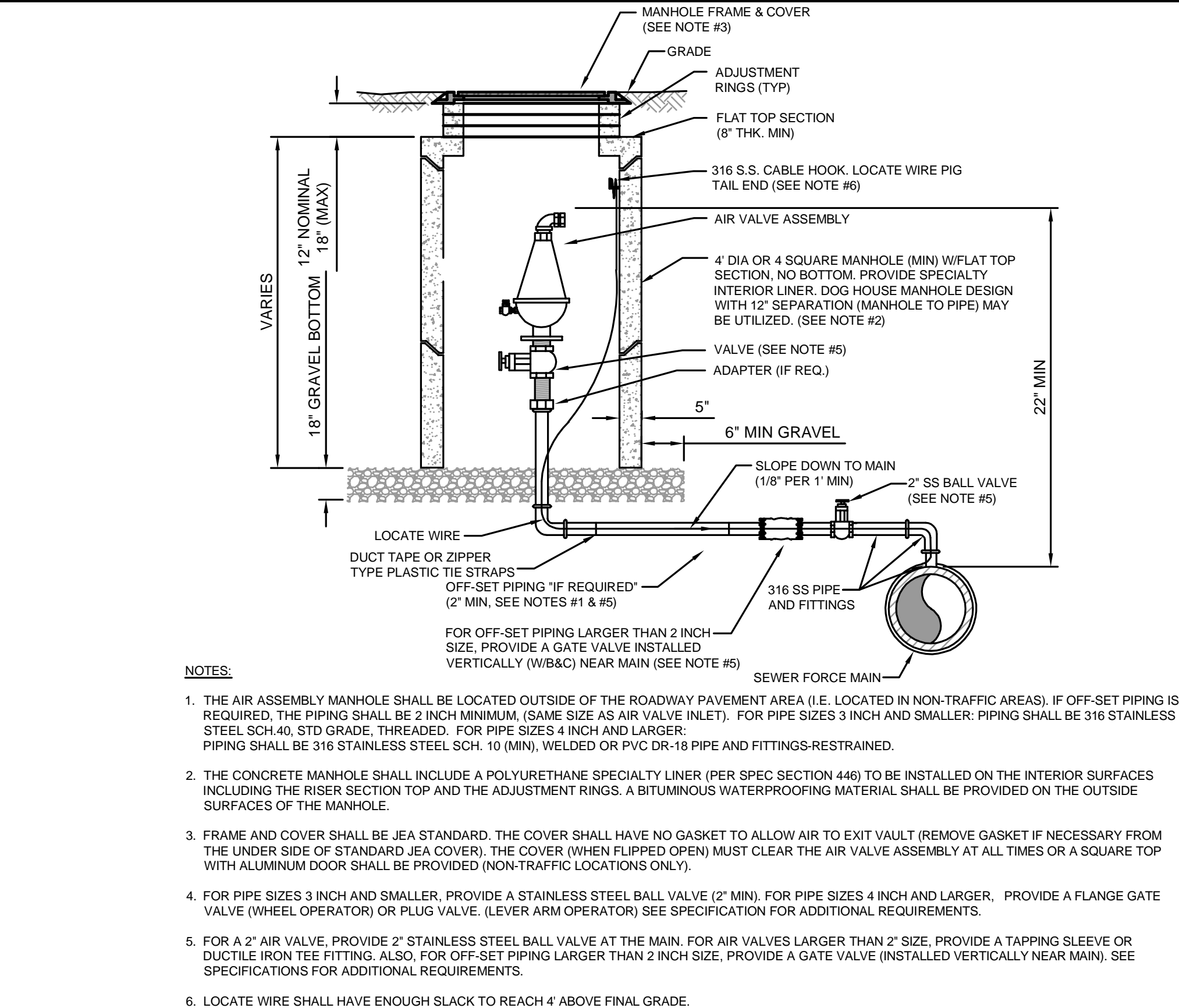
1. THE AIR ASPIRING MANHOLE SHALL BE LOCATED OUTSIDE OF THE ROADWAY PAVEMENT AREA (I.E. LOCATED IN NON-TRAFFIC AREAS). IF OFF-SET PIPING IS REQUIRED, THE PIPING SHALL BE 2 INCH MINIMUM, (SAME SIZE AS AIR VALVE INLET), FOR PIPE SIZES 3 INCH AND SMALLER; PIPING SHALL BE 3/16 STAINLESS STEEL SCH. 40, STD GRADE, THREADED, FOR PIPE SIZES 4 INCH AND LARGER; PIPING SHALL BE 3/16 STAINLESS STEEL SCH. 10 (MIN), WELDED OR PVC DR-18 PIPE AND FITTINGS-RESTRAINED.
2. THE CONCRETE MANHOLE SHALL INCLUDE A POLYURETHANE SPECIALTY LINER (PER SPEC SECTION 446) TO BE INSTALLED ON THE INTERIOR SURFACES INCLUDING THE RISER SECTION TOP AND THE ADJUSTMENT RINGS. A BITUMINOUS WATERPROOFING MATERIAL SHALL BE PROVIDED ON THE OUTSIDE SURFACES OF THE MANHOLE.
3. FRAME AND COVER SHALL BE JEA STANDARD. THE COVER SHALL HAVE NO GASKET TO ALLOW AIR TO EXIT VAULT (REMOVE GASKET IF NECESSARY FROM THE UNDER SIDE OF STANDARD JEA COVER). THE COVER (WHEN FLIPPED OPEN) MUST CLEAR THE AIR VALVE ASSEMBLY AT ALL TIMES OR A SQUARE TOP WITH ALUMINUM DOOR SHALL BE PROVIDED (NON-TRAFFIC LOCATIONS ONLY).
4. FOR PIPE SIZES 3 INCH AND SMALLER, PROVIDE A STAINLESS STEEL BALL VALVE (2" MIN) FOR PIPE SIZES 4 INCH AND LARGER. PROVIDE A FLANGE GATE VALVE (WHEEL OPERATOR) OR PLUG VALVE. (LEVER ARM OPERATOR) SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
5. FOR A 2" AIR VALVE, PROVIDE 2" STAINLESS STEEL BALL VALVE AT THE MAIN. FOR AIR VALVES LARGER THAN 2" SIZE, PROVIDE A TAPPING SLEEVE OR DUCTILE IRON TEE FITTING. ALSO, FOR OFF-SET PIPING LARGER THAN 2 INCH SIZE, PROVIDE A GATE VALVE (INSTALLED VERTICALLY NEAR MAIN). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
6. LOCATE WIRE SHALL HAVE ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE.

AIR VALVE ASSEMBLY INSIDE MANHOLE

JANUARY 2024

PLATE S-29

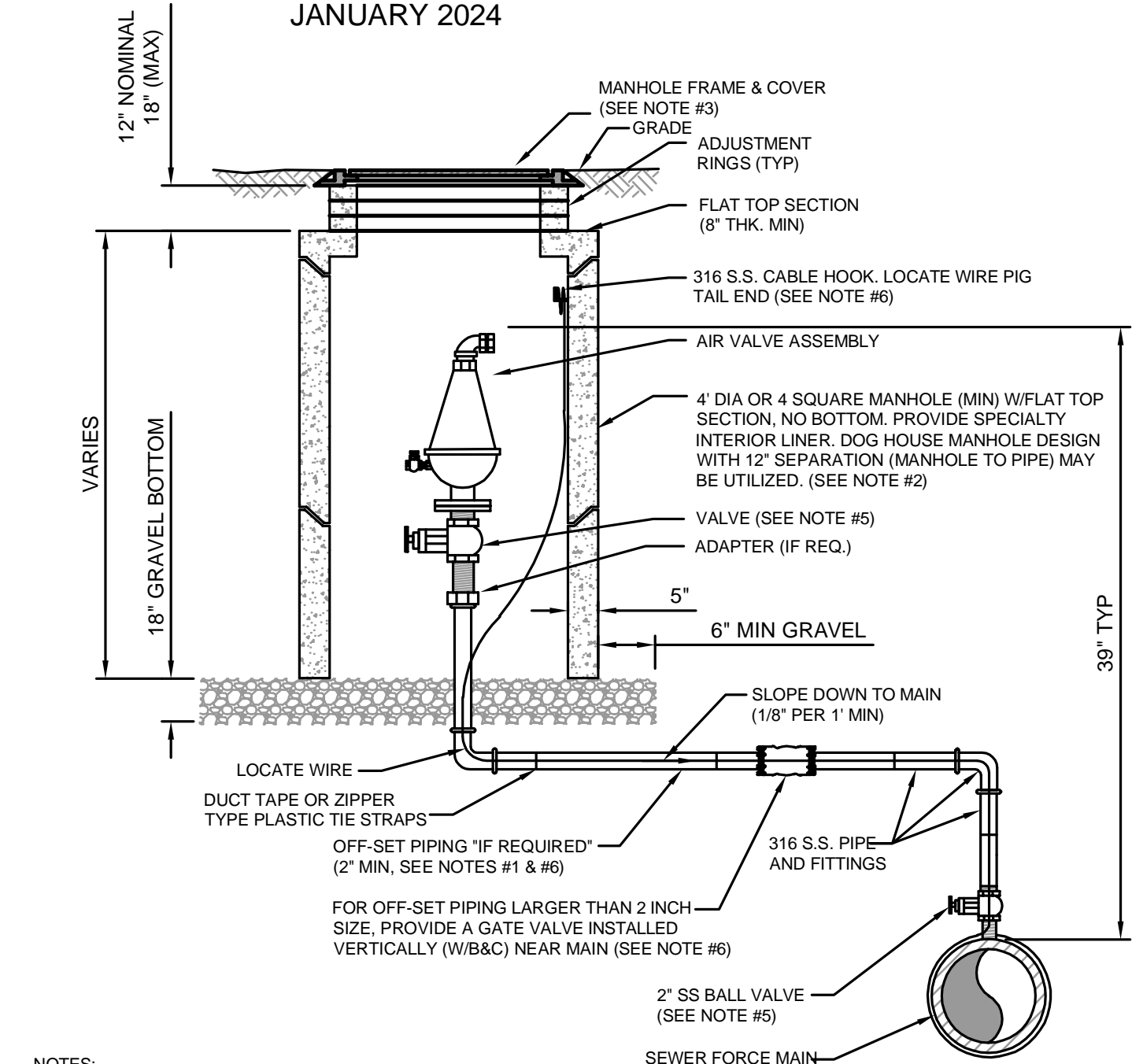
G RE A UTS. E A HALL IF		JEA STANDARD SANITARY SEWER DETAILS		JEA Building Community sm		THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE J.E.A. WE TAKE NO EXCEPTION TO THE DESIGN		ETM England-Thims & Miller, Inc. 14775 Old St. Augustine Road Jacksonville, FL 32218 TEL: (904) 842-8990 FAX: (904) 846-9485 CA - 00002894 LG - 0000316	
NO. SHEETS 5		PROJ. NO. 19-239-01-055		DESIGNER: DRAWN BY: DATE: CHECKED BY: DATE:		DESIGN ENGINEER JOHN ZACHARY BRECHT FLORIDA REGISTRATION NO. 66559		NO. BY DATE REVISIONS	
SHEET NO. 3		DATE: JANUARY 2024						4.	
DRAWING NO. 13C		SCALE: AS NOTED						3.	
								2.	
								1.	



OPTIONAL LOW PROFILE AIR VALVE ASSEMBLY INSIDE MANHOLE

JANUARY 2024

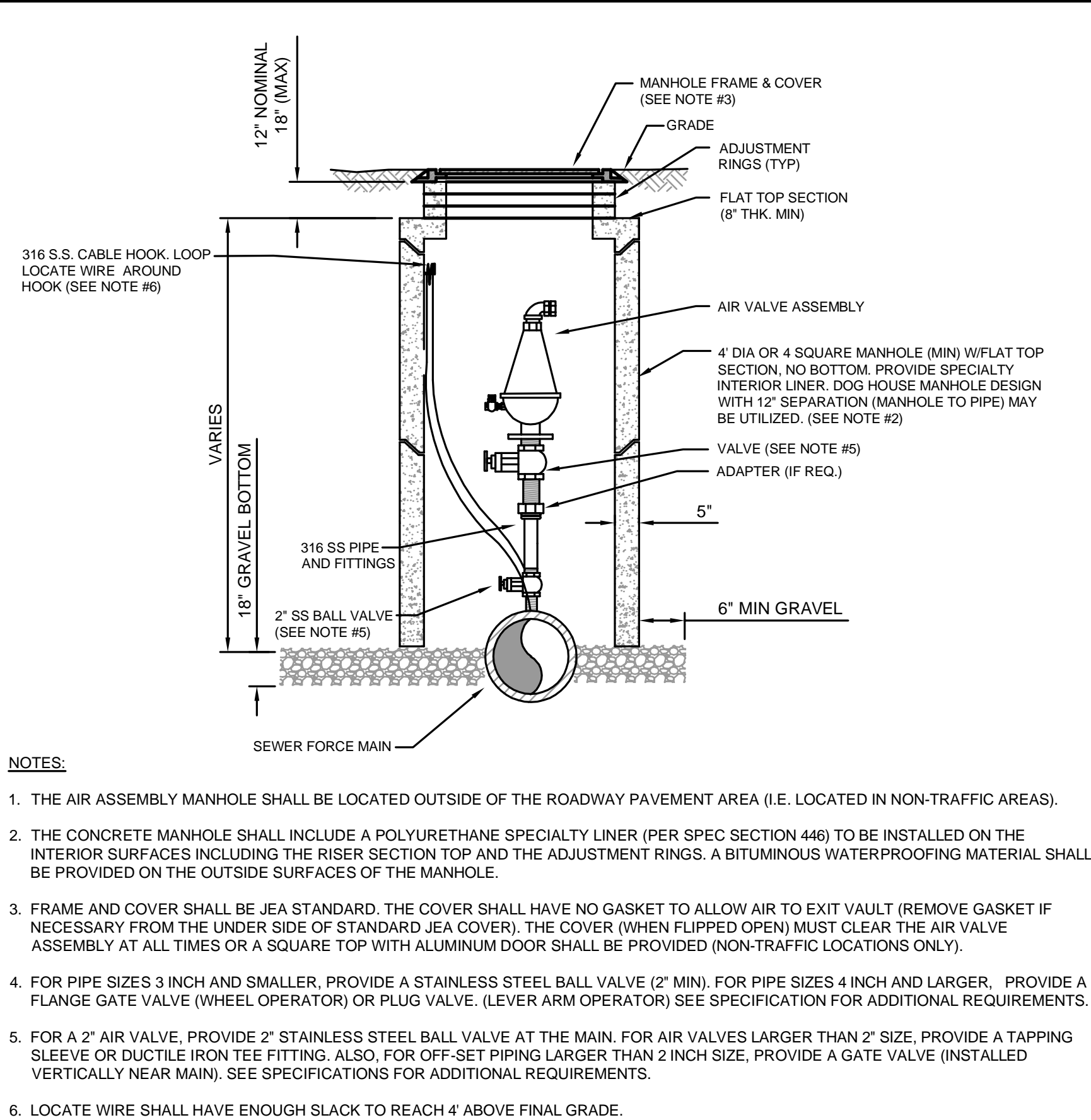
PLATE S-29A



AIR VALVE ASSEMBLY INSIDE MANHOLE

JANUARY 2024

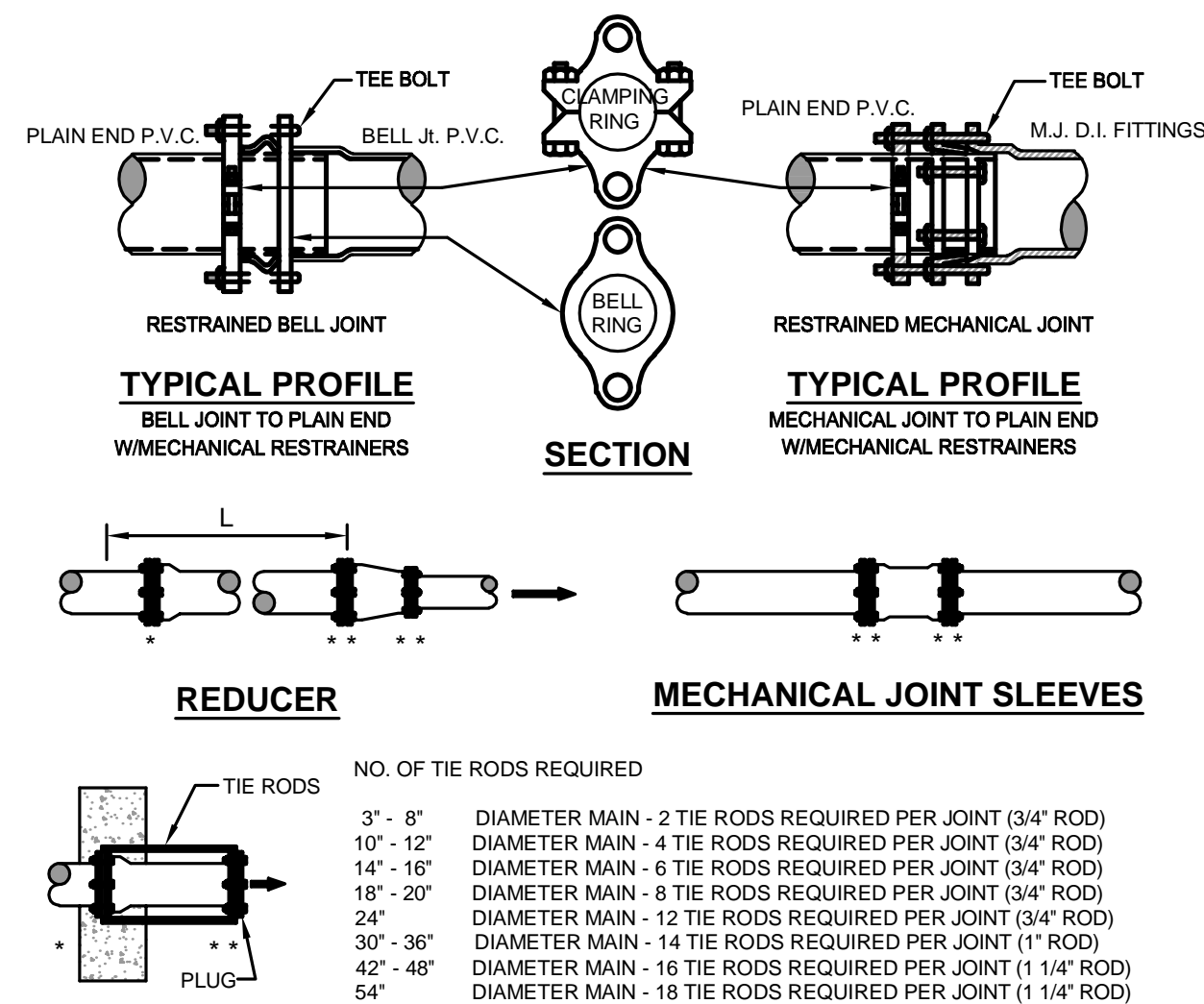
PLATE S-29



AIR VALVE ASSEMBLY INSIDE MANHOLE IN ROW

JANUARY 2024

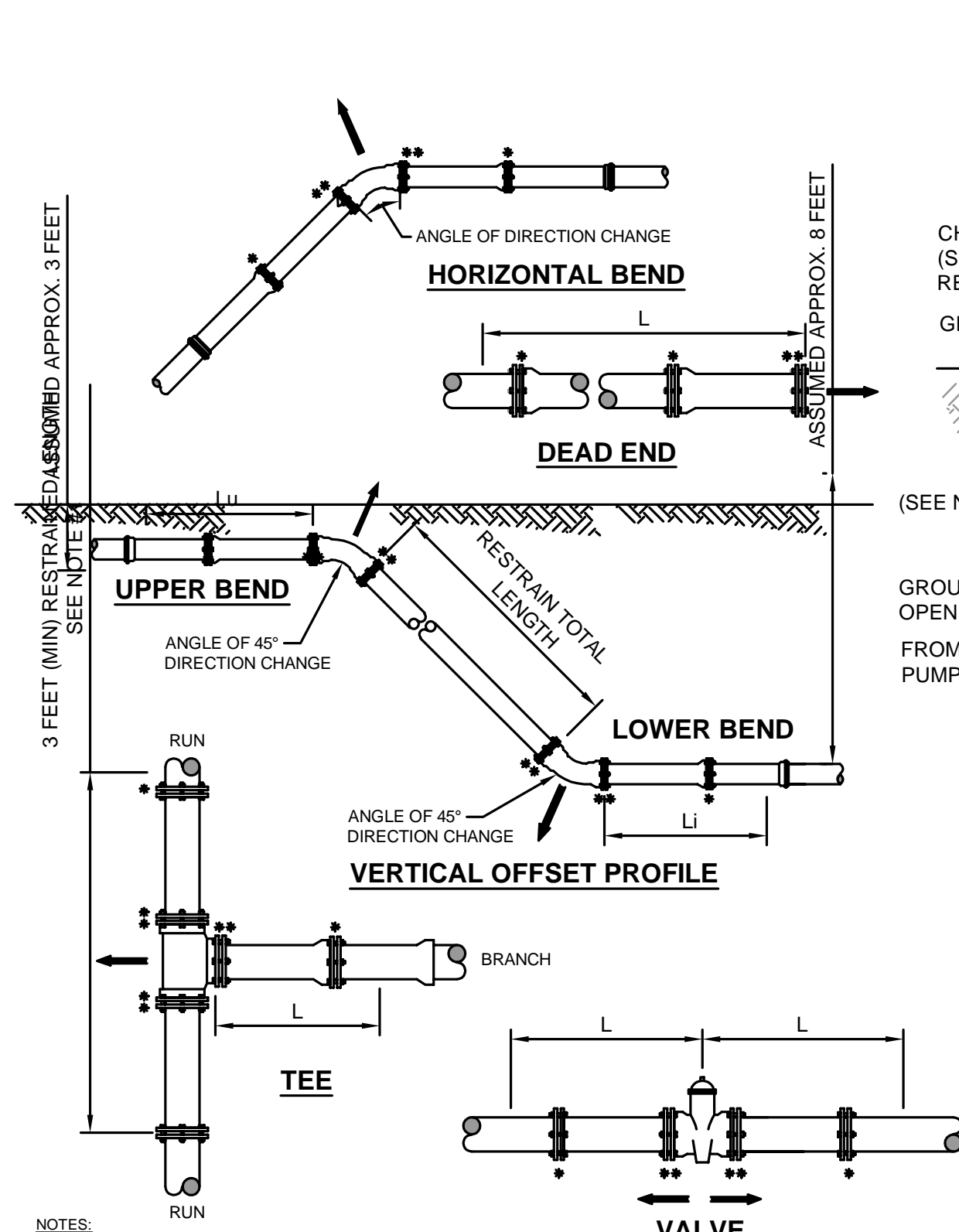
PLATE S-29B



MECHANICAL RESTRAINT DETAILS - I

JANUARY 2024

PLATE S-38C



MECHANICAL RESTRAINT DETAILS - II

JANUARY 2024

PLATE S-38D

LENGTH (L) TO BE RESTRAINED										(SEE PLATE Nos. 38C & 38D FOR ADDITIONAL DETAILS)									
NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS					VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS		REDUCERS		TEES SEE NOTE 5							
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	45° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)			SIZE (IN.)	L (FT.)	RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)					
4	21	9	5	3	17	3	47			6x4	34	4	4	F.O.					
6	30	13	6	3	23	4	66			8x6	36	4	6	F.O.					
8	38	16	8	4	30	6	86			8x4	62	8	4 < LESS	F.O.					
10	45	19	9	5	36	7	103			10x8	35	10	6 < LESS	F.O.					
12	53	22	11	6	43	8	121			10x6	63	10	8	F.O.					
14	61	26	13	6	50	9	140			12x10	36	12	6 < LESS	F.O.					
16	66	28	14	7	55	10	154			12x8	64	12	8 < LESS	F.O.					
18	73	30	15	8	60	11	170			16x12	66	16	12	F.O.					
20	79	33	16	8	66	12	186			16x10	92	20	12	F.O.					
24	79	33	16	8	77	15	185			20x16	35	24	16	F.O.					
30	93	39	19	10	97	17	222			20x16	66	30	20	F.O.					
36	106	39	21	11	107	20	257			24x20	56	36	24	F.O.					
42	117	49	24	12	120	24	289			24x18	80	42	24	F.O.					
48	144	53	26	13	133	26	321			24x16	101	48	24	F.O.					

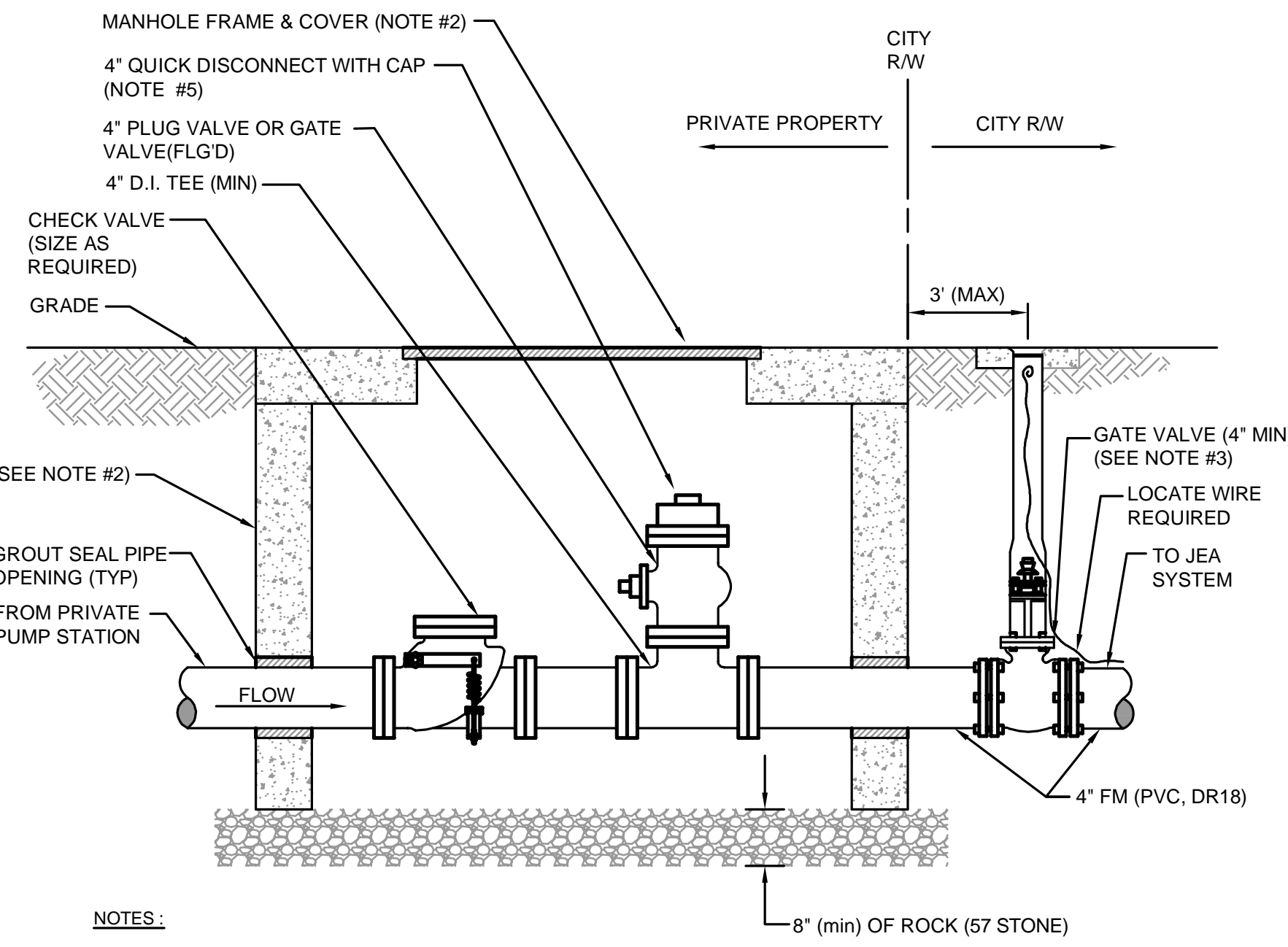
PVC PIPE RESTRAINT NOTES:

1. THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
2. ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
3. BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
4. VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, L_U IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL, L_L IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
5. TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE 'BRANCH' LINE.
6. HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
7. THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERHOMING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

PVC PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2024

PLATE S-38A



PRIVATE PUMP OUT ASSEMBLY

JANUARY 2024

PLATE S-46

England, Thims & Miller, Inc.
14776 Old St. Augustine Road
Jacksonville, FL 32228
TEL: (904) 646-3228
FAX: (904) 646-9485
CA - 0000284 LC - 0000316

ETM
VISION • EXPERIENCE • RESULTS

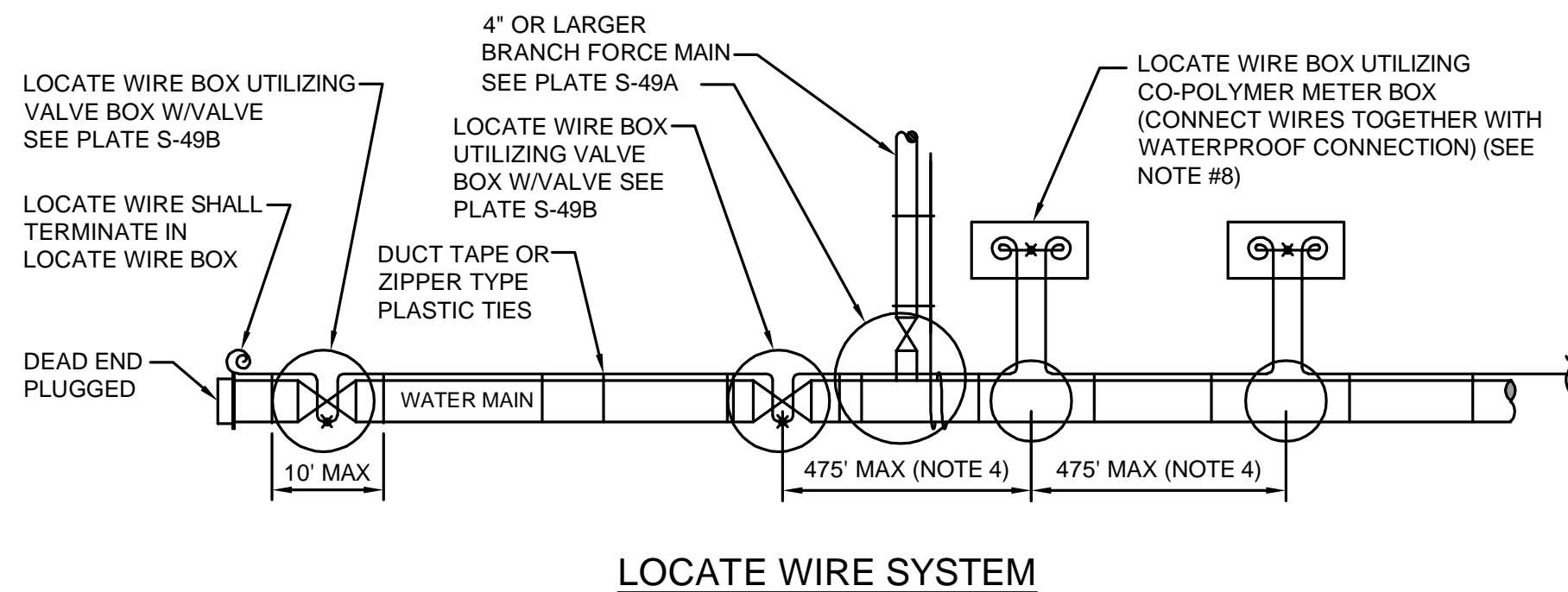
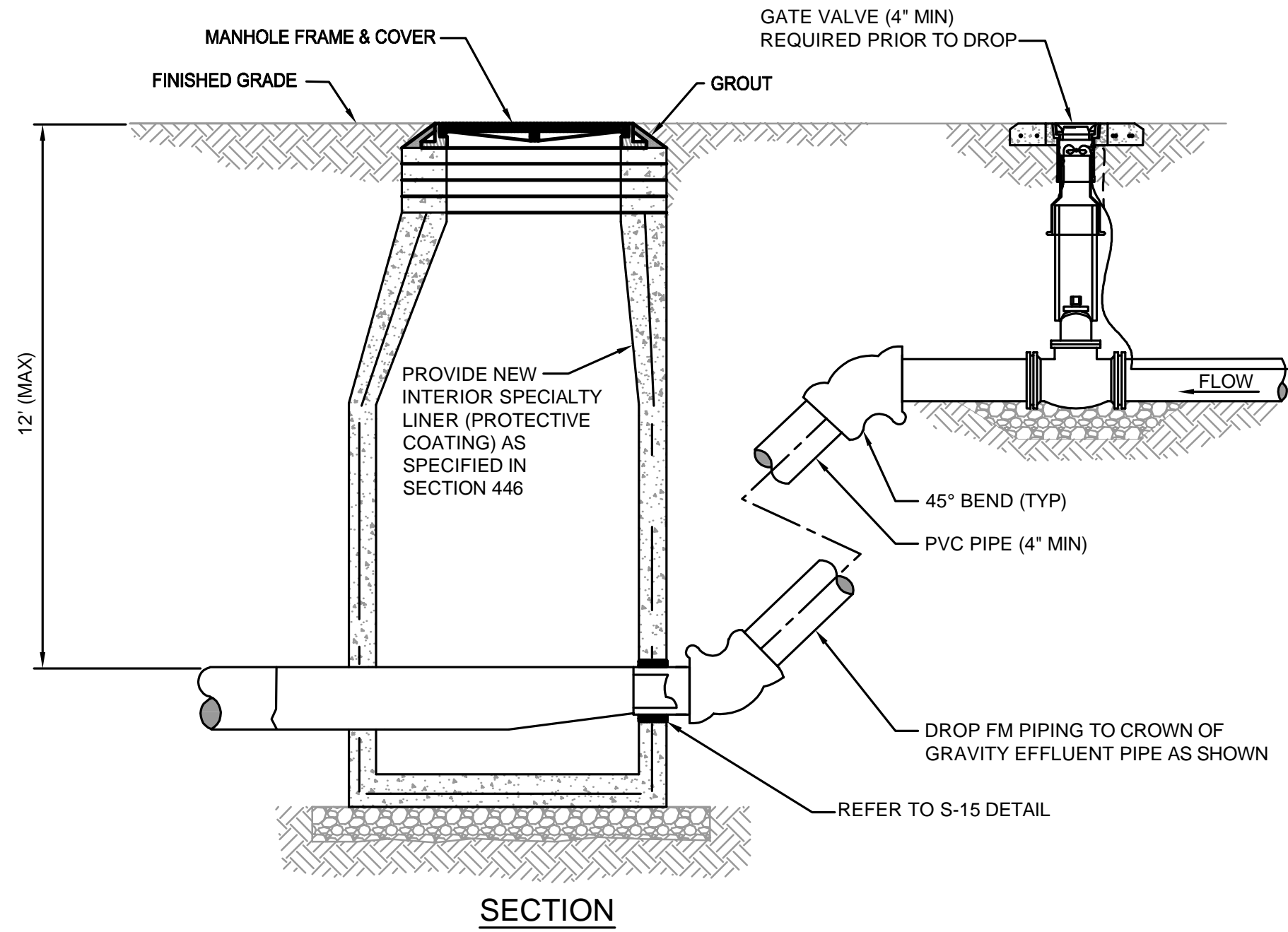
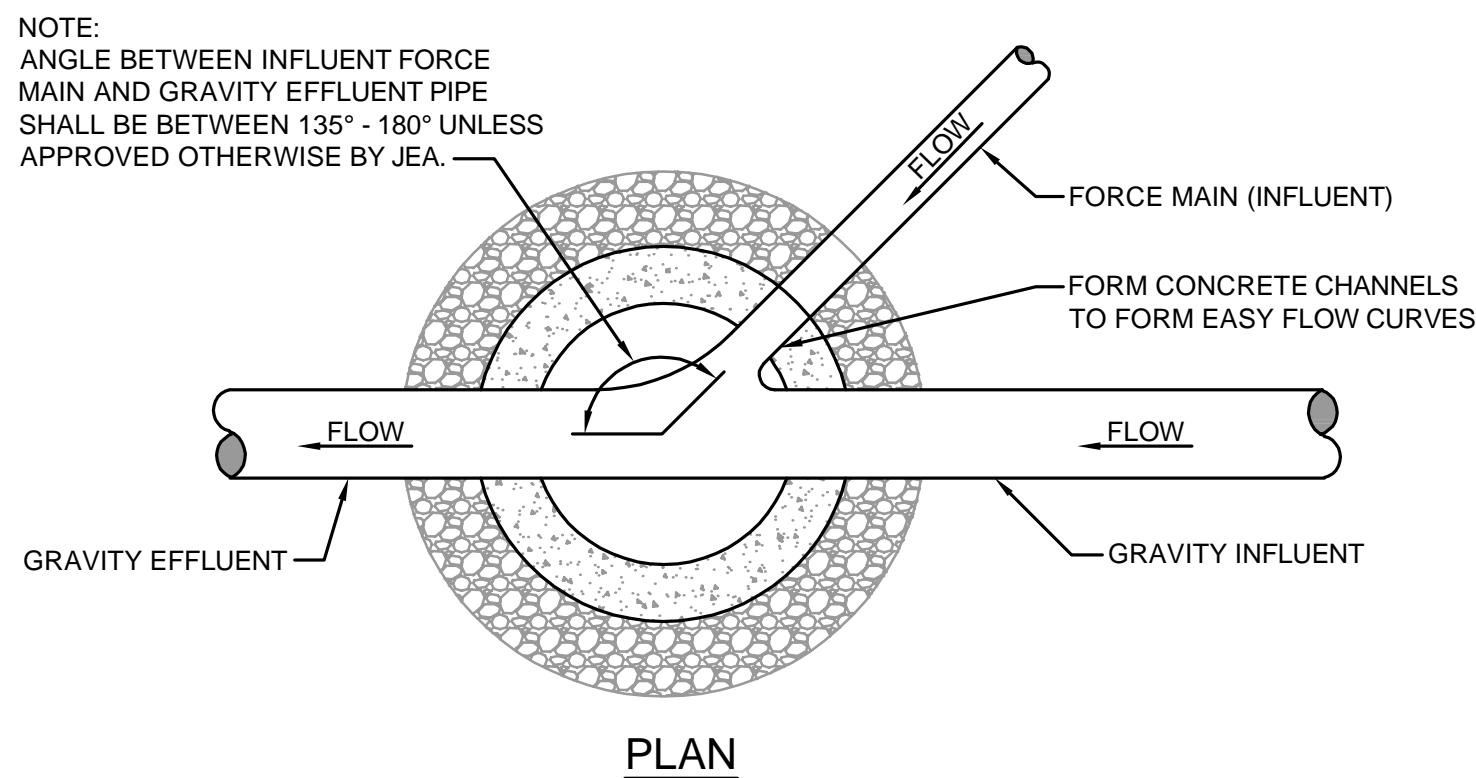
THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE JEA. WE TAKE NO EXCEPTION TO THE DESIGN

DESIGNER	DESIGN ENGINEER	NO.	BY	DATE	REVISIONS
JEA	JOHN ZACHARY BRECHT	4			
	FLORIDA REGISTRATION NO.	3			
		2			
		1			



PROJ. NO.	DATE	SCALE
19-239-01-055	JANUARY 2024	AS NOTED

NO. SHEETS	SHEET NO.	DRAWING NO.
5	4	13D

JEA STANDARD
SANITARY SEWER DETAILS
WILDLIGHT AVENUE PHASE 4



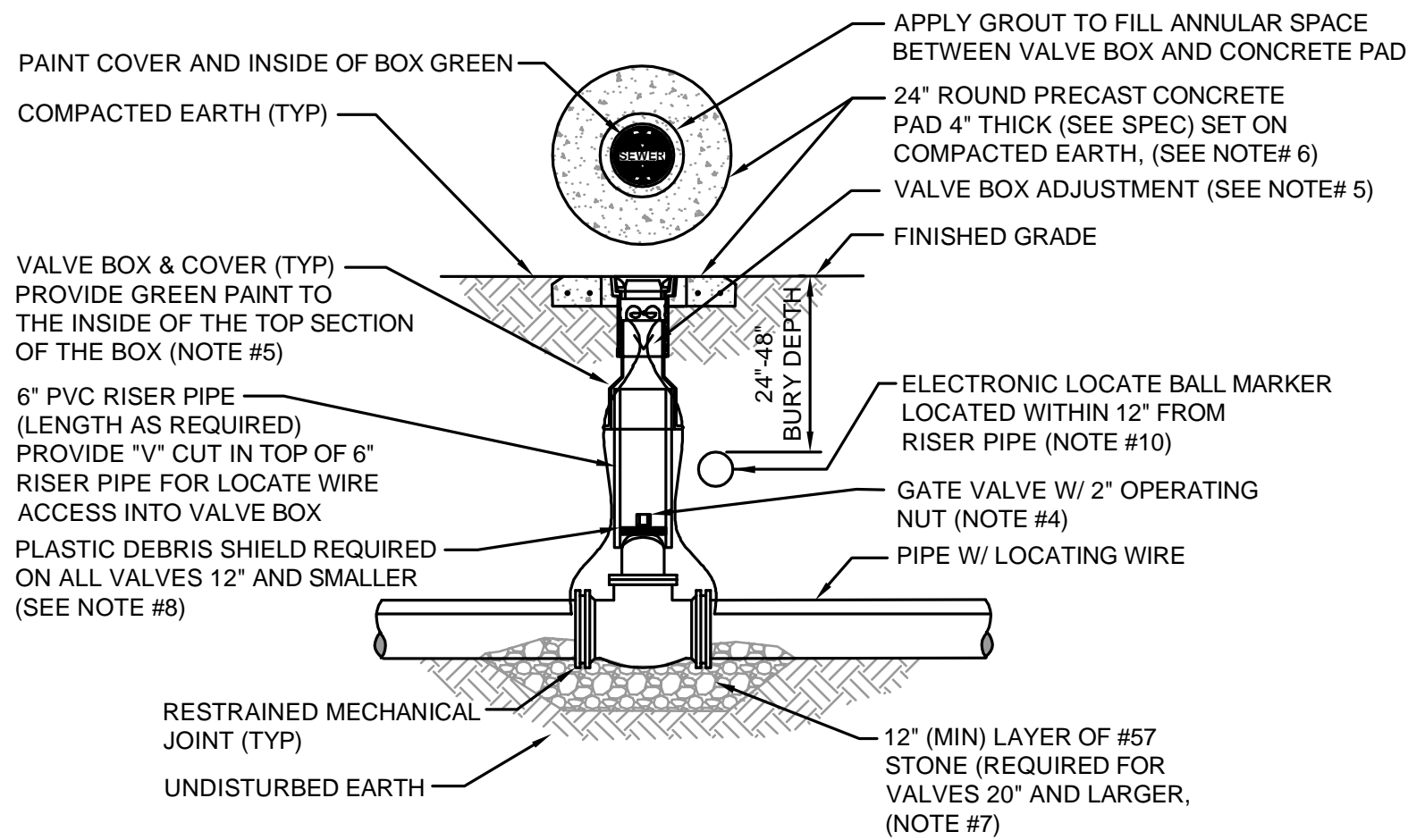
- NOTES:

1. LOCATING WIRE TO BE INSTALLED IN EITHER THE ONE OR ELEVEN O'CLOCK POSITION ON ALL DUCTILE IRON OR PVC (PRESSURE MAINS). LOCATE WIRE SHALL ALSO BE INSTALLED ON ALL (HDPE) POLY MAIN PIPING (1:00 OR 11:00 POSITION, IF POSSIBLE).
2. SECURE LOCATING WIRE TO PVC FORCE MAIN BY USE OF DUCT TAPE OR ZIPPER TYPE PLASTIC TIE STRAPS SPACED AT A MAXIMUM DISTANCE OF TEN (10') AND AT EACH SIDE OF BELL JOINT OR FITTING.
3. THE ENTIRE LOCATING SYSTEM SHALL BE SUBJECTED TO TESTING TO DETERMINE ITS RELIABILITY. WHERE INSTALLED UNDER PAVEMENT AREAS, TESTING SHALL BE DONE PRIOR TO THE PLACEMENT OF PAVEMENT, UNLESS APPROVED OTHERWISE BY JEA.
4. LOCATING WIRE SHALL TERMINATE WITHIN AN ACTIVE VALVE BOX (WITH A VALVE) OR A METER BOX (IF NO VALVE) AT 47' INTERVALS. SEE DETAIL PLATE S-49B. WIRE CONNECTIONS BELOW GROUND (OUTSIDE OF A BOX) SHALL BE AVOIDED.
5. LOCATING WIRE SHALL BE 12 GAUGE COPPER WIRE WITH .03 INCHES (MINIMUM) HDPE INSULATION THICKNESS, 0.141 INCHES (MINIMUM) O.D. RATED BREAK LOAD 250LBS., UF RATED (DIRECT BURIAL), GREEN COLOR. FOR HDD INSTALLATIONS, THE LOCATE WIRE SHALL BE COPPER CODED STEEL AS SPECIFIED IN SPEC. SECTION 750.
6.  INDICATES THAT THE WIRES ARE CONNECTED TOGETHER WITH WATERPROOF CONNECTION. (SEE DETAIL W-49B)
7.  INDICATES A WIRE PIG-TAIL (24" LONG)
8. AN "LW" CUT SHALL BE CARVED IN THE CONCRETE CURB AND PAINTED AT ALL LOCATE WIRE BOXES.
9. FOUR LANES OF TRAFFIC (HAVING TWO LANES OF TRAFFIC IN EACH DIRECTION) OR GREATER THE LOCATE WIRE AND VALVE BOX SHALL BE OFF-SET TO THE RIGHT-OF-WAY.

LOCATE WIRE CONSTRUCTION FOR FORCE MAINS

JANUARY 2024

PLATE S-49



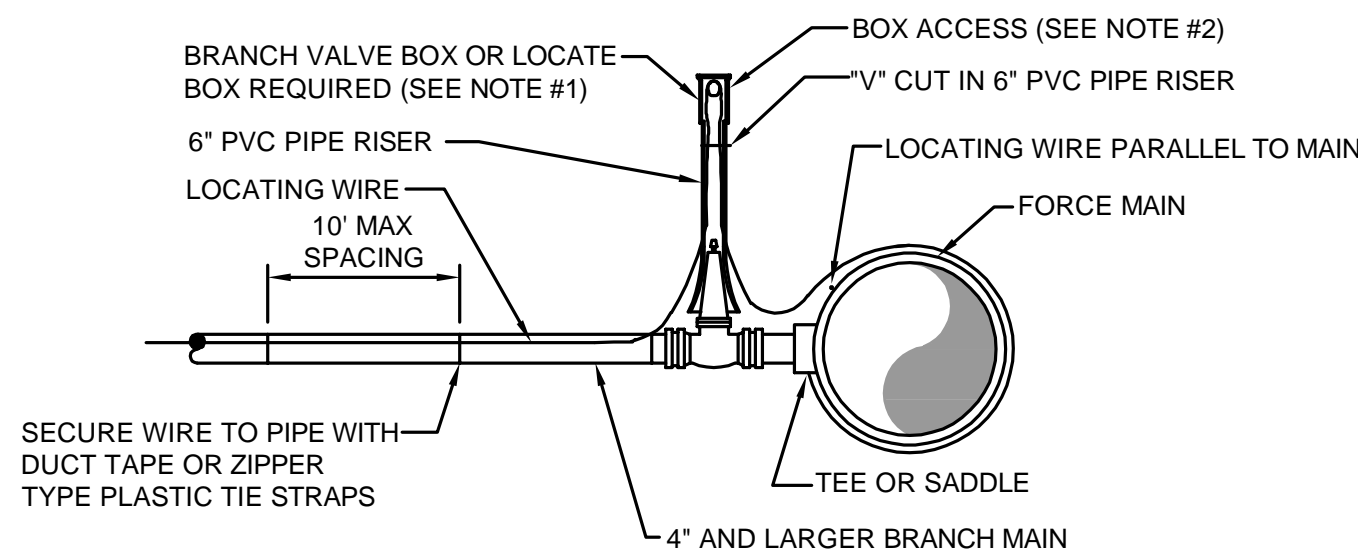
NOTES:

3. FOR UNPAVED LOCATIONS, A PRECAST CONCRETE VALVE PAD SHALL BE PROVIDED AND INSTALLED FLUSH WITH GRADE. CONCRETE PAD IS NOT REQUIRED FOR VALVE LOCATED IN THE ROADWAY, UNLESS SHOWN OR NOTED OTHERWISE.
2. LOCATING WIRE IS REQUIRED ON ALL PRESSURE PIPING (SEE DETAIL S-49).
3. A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/ (ASPHALT IF NO CURB) ADJACENT TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED GREEN.
4. IN PAVED AREAS, INSTALL VALVE AT A DEPTH TO ALLOW A 12" MIN. DISTANCE BETWEEN THE VALVE COVER PLATE AND THE TOP OF THE VALVE OPERATING NUT. OUTSIDE OF PAVED AREAS (GRASS), INSTALL VALVE AT A DEPTH TO ALLOW A 6" MINIMUM DISTANCE BETWEEN THE VALVE COVER AND THE TOP OF THE VALVE OPERATING NUT. OPERATING NUT/STEM EXTENSION SHALL BE PROVIDED (WHERE APPLICABLE) SO THAT THE OPERATING NUT WILL BE NO MORE THAN 30 INCHES BELOW FINISHED GRADE.
5. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS. ROUTE LOCATE WIRES THRU A "V" CUT IN THE TOP OF THE 6" PVC RISER PIPE FOR LOCATE WIRE ACCESS INTO VALVE BOX. THE LOCATE WIRES WITH A 24" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
6. BRASS IDENTIFICATION TAG INDICATING "SEWER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A 1/2" HOLE IN BRASS TAG AND ATTACH TAG (TWIST WIRE AROUND TAG) TO THE END OF THE LOCATE WIRE. TAGS ARE NOT REQUIRED ON VALVES INSTALLED ON FIRE HYDRANT BRANCH LINES.
7. IN LIEU OF PRECAST CONCRETE PAD, A 6" THICK X 24" (ROUND OR SQUARE) POURED CONCRETE PAD W/2" #4 REBAR AROUND PERIMETER, MAY BE USED.
8. GRAVEL SHALL BE PROVIDED UNDER ALL VALVES 20" AND LARGER. THE MINIMUM VERTICAL LIMIT OF GRAVEL IS 12" UNDER THE VALVE UP TO 1/2 THE OVERALL HEIGHT OF THE VALVE.
9. FOR VALVES 12 INCH AND SMALLER, PROVIDE A WHITE OR BLACK PLASTIC DEBRIS SHIELD WHICH INSTALLS BELOW THE OPERATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE OVER THE OPERATING NUT AND MINIMIZE INFILTRATION. SHIELD SHALL BE BY AFC, BOXLOK OR APPROVED EQUAL.
10. ALL VALVES SHALL BE INSTALLED WITH AN ELECTRIC LOCATE MARKER. MARKER SHALL BE 4" DIA. COLOR CODED BALL MARKER (3M-1404XR FOR SEWER).

SEWER VALVE DETAIL

JANUARY 2024


PLATE S-30



BRANCH FORCE MAIN

(4" AND LARGER SEWER MAIN)

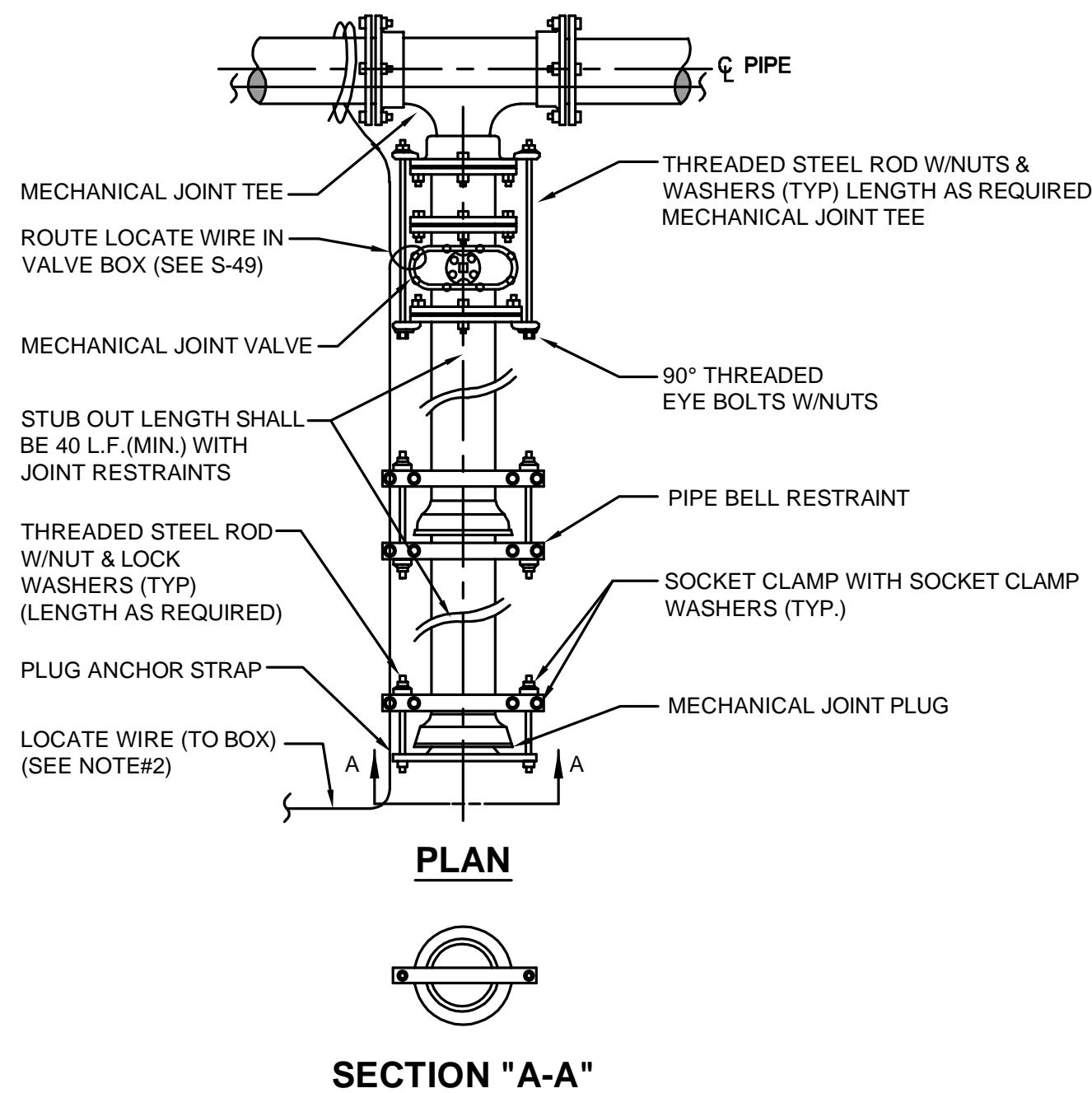
NOTE:

1. NOTE THAT THE BRANCH WIRE IS NOT CONNECTED TO THE MAIN WIRE.
2. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE SECTION (SEE S-30).
3. LOCATE WIRE BOX SHALL BE INSTALLED OUTSIDE OF SIDEWALKS, DRIVEWAYS AND PAVEMENT.
4.  INDICATES A WIRE PIG-TAIL (4' LONG)

LOCATE WIRE FOR BRANCH MAIN

JANUARY 2024

PLATE S-49A



SECTION "A-A"

NOTES:

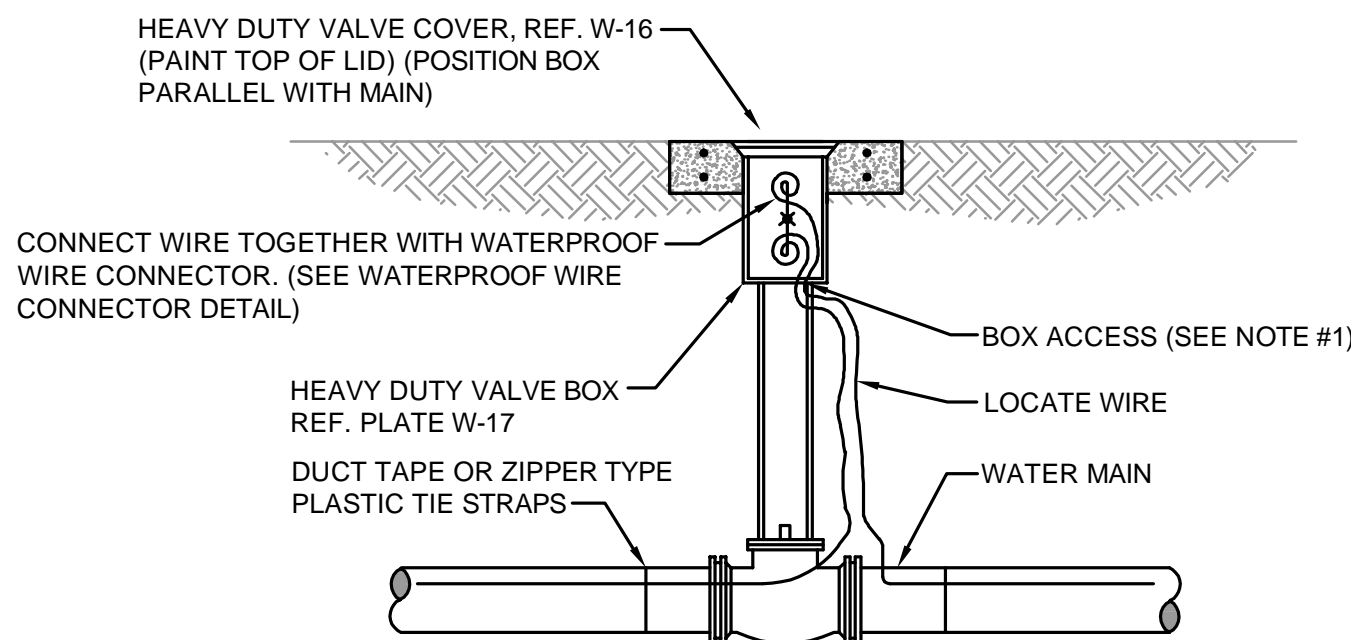
1. IN LIEU OF BELL/ROD RESTRAINTS, MECHANICAL JOINT RESTRAINTS MAY BE USED.
2. LOCATING WIRE REQUIRED, UTILIZING A LOCATE WIRE BOX INSTALLED AT PLUG LOCATION.
3. NUMBER OF THE RODS REQUIRED IS AS FOLLOWS:

3" - 8"	DIAMETER MAIN - 2 TIE RODS REQUIRED PER JOINT (3/4" ROD)
10" - 12"	DIAMETER MAIN - 4 TIE RODS REQUIRED PER JOINT (3/4" ROD)
14" - 16"	DIAMETER MAIN - 6 TIE RODS REQUIRED PER JOINT (3/4" ROD)
18" - 20"	DIAMETER MAIN - 8 TIE RODS REQUIRED PER JOINT (3/4" ROD)
22" - 24"	DIAMETER MAIN - 12 TIE RODS REQUIRED PER JOINT (3/4" ROD)
30" - 36"	DIAMETER MAIN - 14 TIE RODS REQUIRED PER JOINT (1" ROD)
42" - 48"	DIAMETER MAIN - 16 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
54"	DIAMETER MAIN - 18 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
4. THE LOCATION OF THE DEAD END PLUG SHALL NOT BE UNDER PAVEMENT, IF POSSIBLE. IF POSSIBLE, THE STRUCTURE SHALL EXTEND BEYOND THE INTERSECTION AREAS OR ROAD CROSSING BY 10 FEET (MIN.) WHERE POSSIBLE.

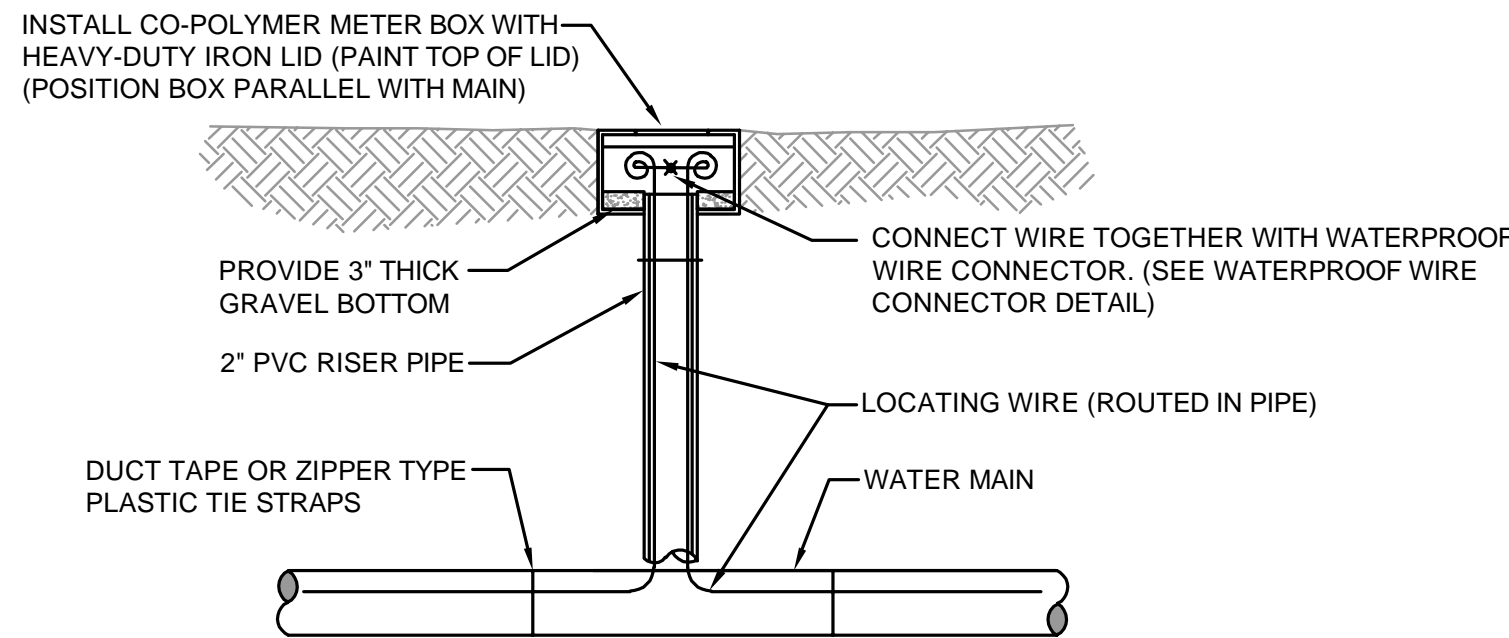
PLUGGED DEAD END USING MECHANICAL RESTRAINTS

JANUARY 2024

PLATE S-44



LOCATE WIRE BOX UTILIZING VALVE BOX



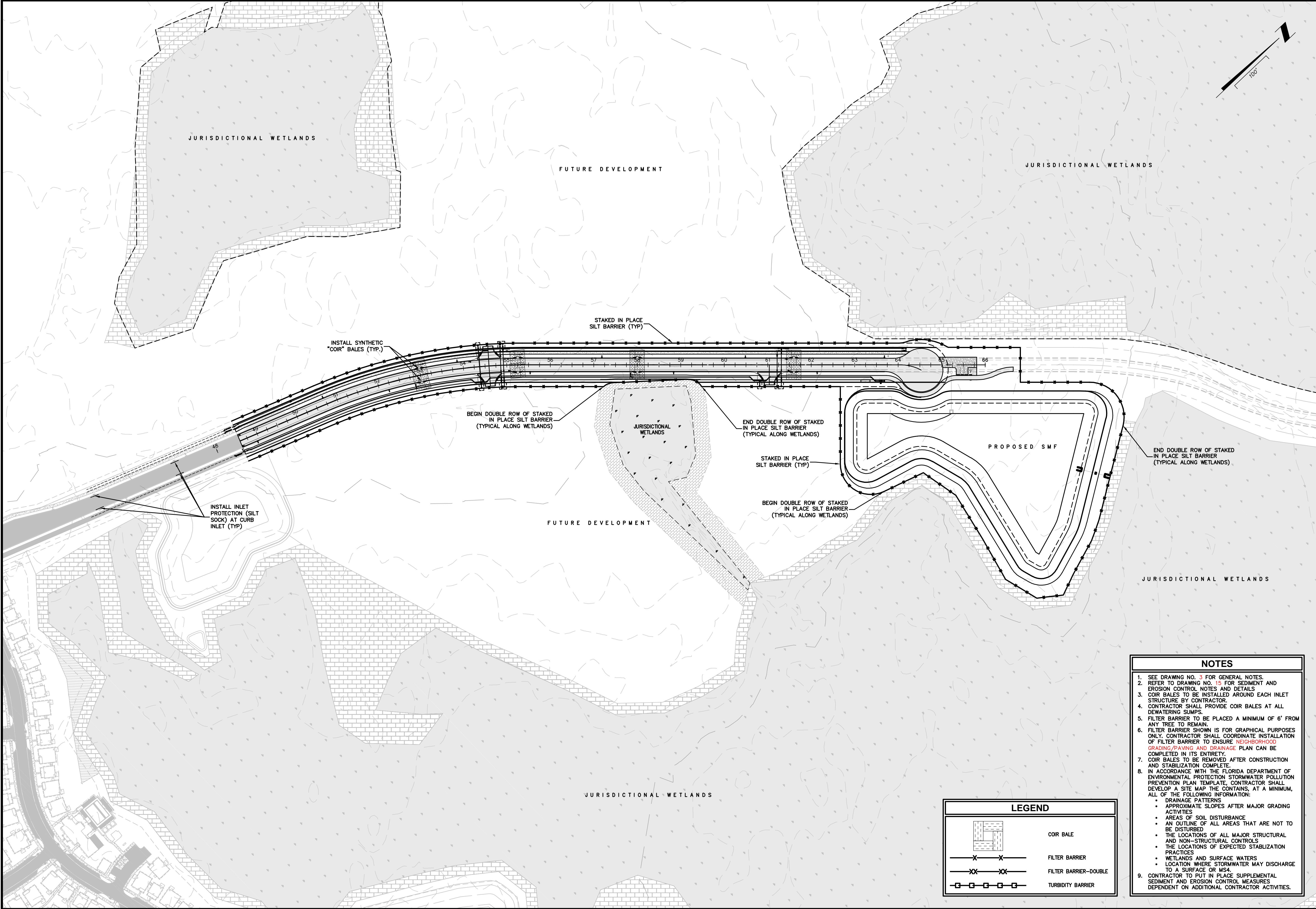
LOCATE WIRE BOX UTILIZING METER BOX

LOCATE WIRE BOX

JANUARY 2024

PLATE S-49B

PROOF WIRE		B I		44		THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE J.E.A. WE TAKE NO EXCEPTION TO THE DESIGN		<div><div>England-Thims & Miller, Inc. 14775 Old St. Augustine Road Jacksonville, FL 32226 TEL: (904) 842-8990 FAX: (904) 846-9485 CA - 00002384 LC - 0000316</div></div> <div>VISION • EXPERIENCE • RESULTS</div>			
NO. SHEETS 5	PROJ. NO. 19-239-01-055	JEA STANDARD SANITARY SEWER DETAILS				DESIGNER JOHN ZACHARY BRECHT		NO.	BY	DATE	REVISIONS
		DATE: JANUARY 2024				FLORIDA REGISTRATION NO. 66559					
SHEET NO. 5	SCALE: AS NOTED	WILDLIGHT AVENUE PHASE 4				DRAWN BY: DATE: CHECKED BY: DATE:		1.			
DRAWING NO. 13E								2.			
								3.			
								4.			



- NOTES
1. SEE DRAWING NO. 3 FOR GENERAL NOTES.

2. REFER TO DRAWING NO. 15 FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS.

3. COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR.

4. CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING SUMPS.

5. FILTER BARRIER TO BE PLACED A MINIMUM OF 6' FROM ANY TREE TO REMAIN.

6. FILTER BARRIER SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE NEIGHBORHOOD GRADING/PAVING AND DRAINAGE PLAN CAN BE COMPLETED IN ITS ENTIRETY.

7. COIR BALES TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE.

8. IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STORMWATER POLLUTION PREVENTION PLAN TEMPLATE, CONTRACTOR SHALL DEVELOP A SITE MAP THAT CONTAINS, AT A MINIMUM, ALL OF THE FOLLOWING INFORMATION:
 - DRAINAGE PATTERNS
 - APPROXIMATE SLOPES AFTER MAJOR GRADING ACTIVITIES
 - AREAS OF SOIL DISTURBANCE
 - AN OUTLINE OF ALL AREAS THAT ARE NOT TO BE DISTURBED
 - THE LOCATIONS OF ALL MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS
 - THE LOCATIONS OF EXPECTED STABILIZATION PRACTICES
 - WETLANDS AND SURFACE WATERS
 - LOCATION WHERE STORMWATER MAY DISCHARGE TO A SURFACE OR MS4.

9. CONTRACTOR TO PUT IN PLACE SUPPLEMENTAL SEDIMENT AND EROSION CONTROL MEASURES DEPENDENT ON ADDITIONAL CONTRACTOR ACTIVITIES.

LEGEND	
	COIR BALE
	FILTER BARRIER
	FILTER BARRIER-DOUBLE
	TURBIDITY BARRIER

SEDIMENT AND EROSION CONTROL PLAN

WILDLIGHT AVENUE PHASE 4 FOR RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER

14

ETM

ENGLAND-THIMS & MILLER

Trusted Advisors, Creating Community

PLANS PREPARED UNDER THE DIRECTION OF:

ETM NO. 19-239-01-055

DRAWN BY: TS

DESIGNED BY: JZB

CHECKED BY: JZB

DATE: MAY 2024

REVISIONS:

1411 Edgewater Drive, Ste. 200
Orlando, Florida 32804
(407) 536-5379
www.etmnc.com
CA-00002584 LC-0000316

PLANNED UNDER THE DIRECTION OF:

JOHN ZACHARY BRECHT
P.E. NUMBER: 66559

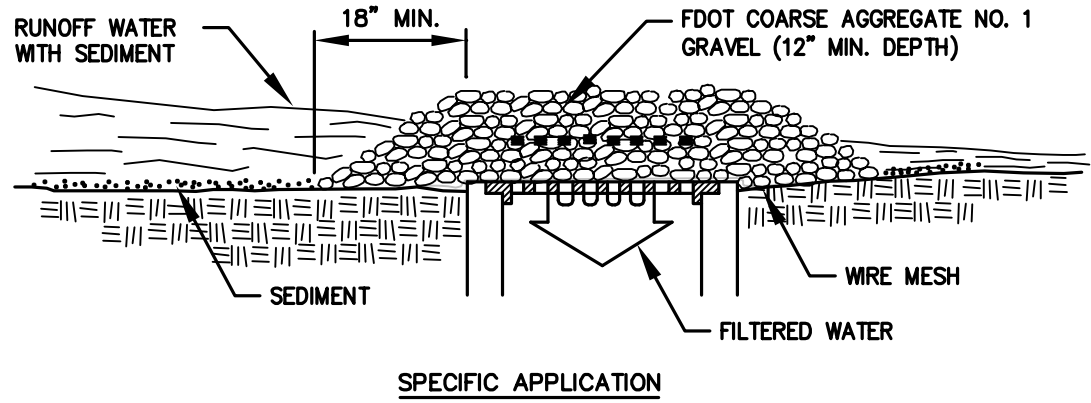
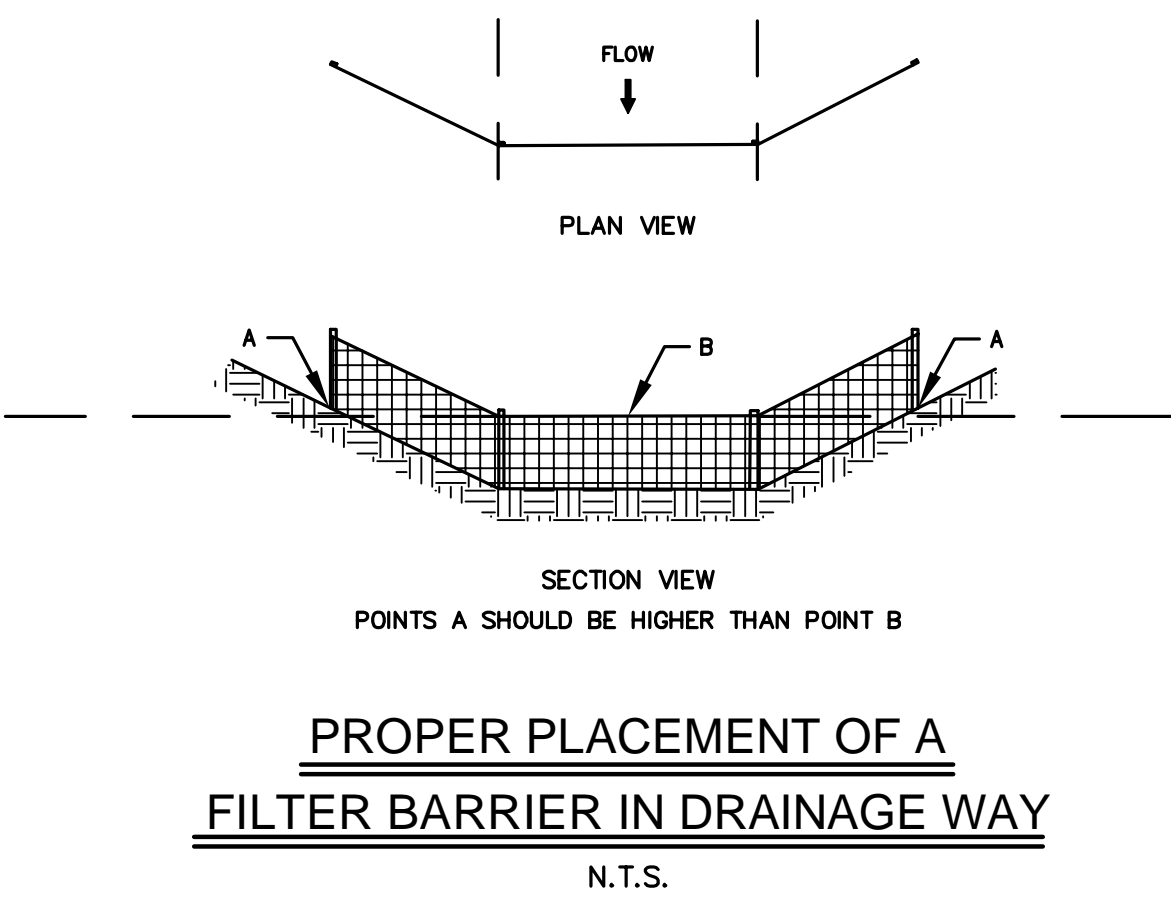
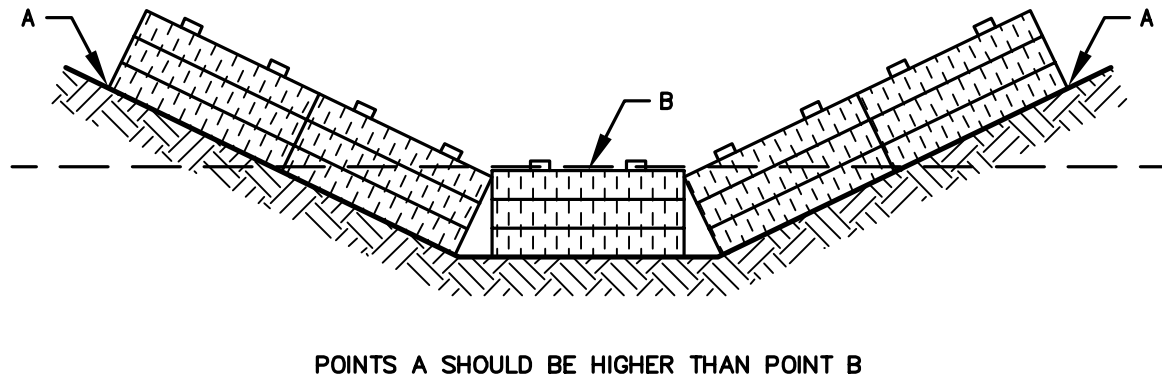
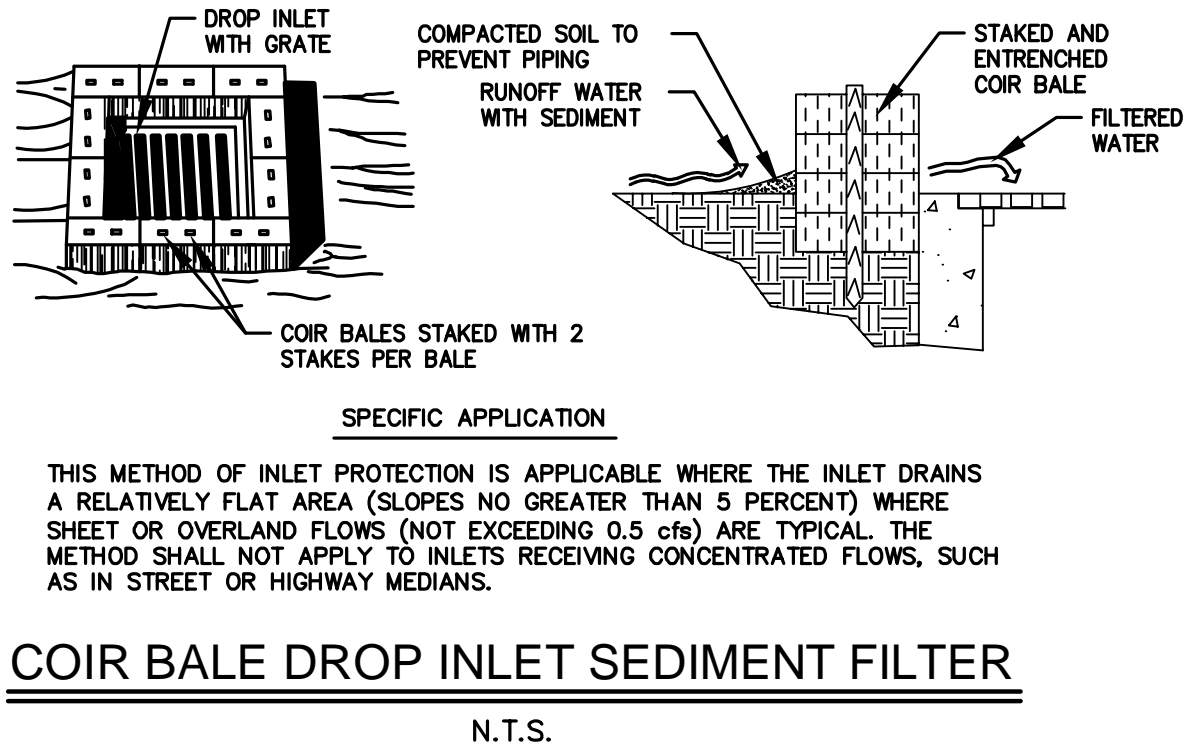
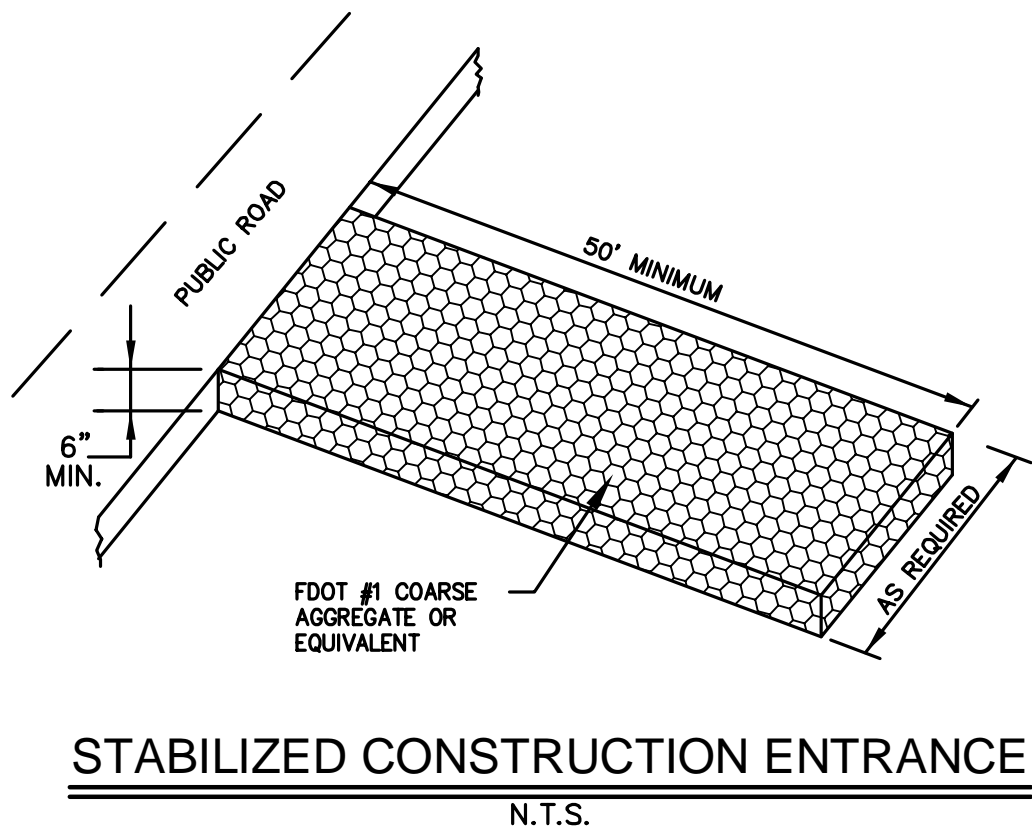
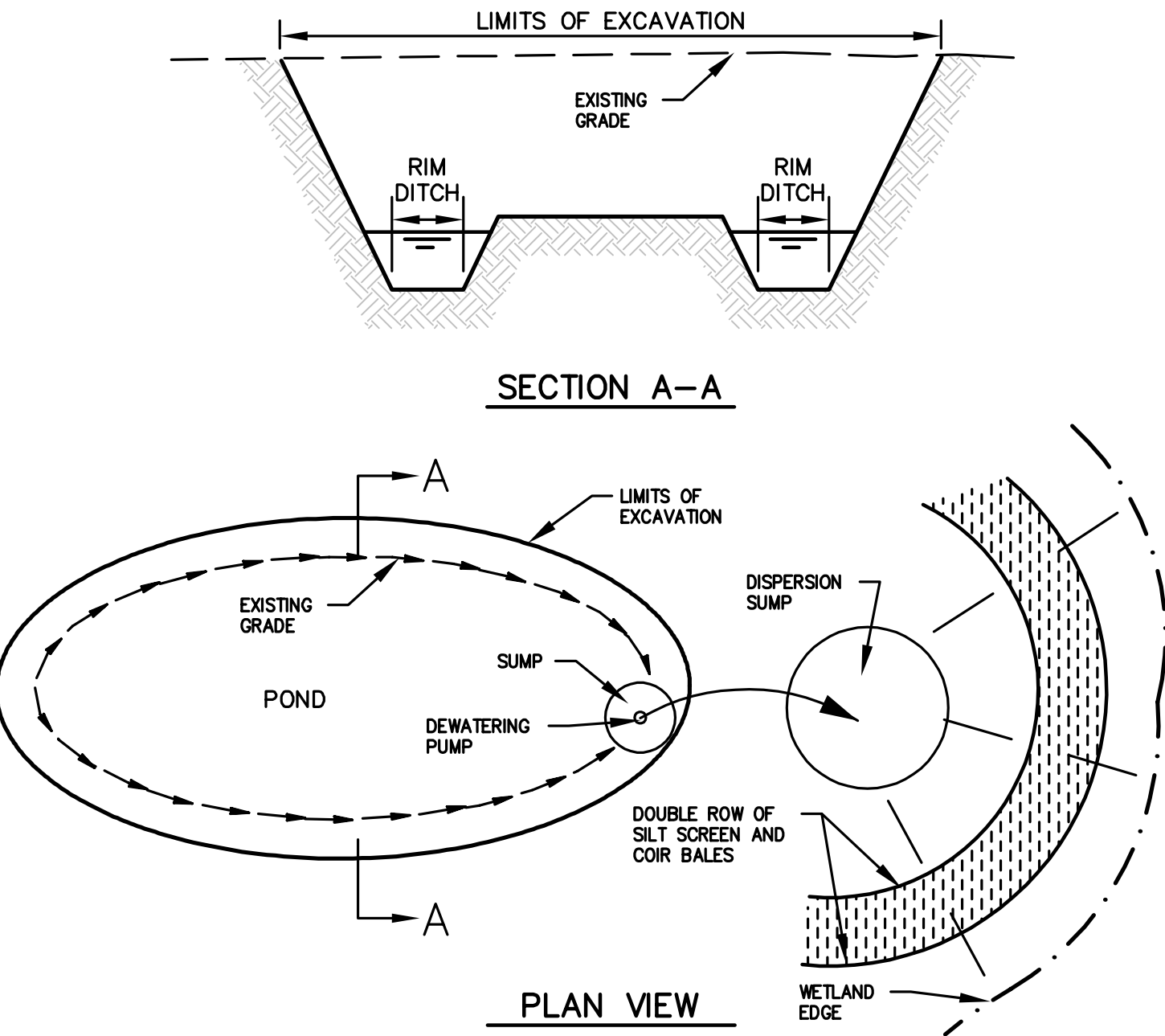
PLOTTED: June 28, 2024 - 9:09 AM, BY: Anthony Dornes

SEDIMENT AND EROSION CONTROL NOTES

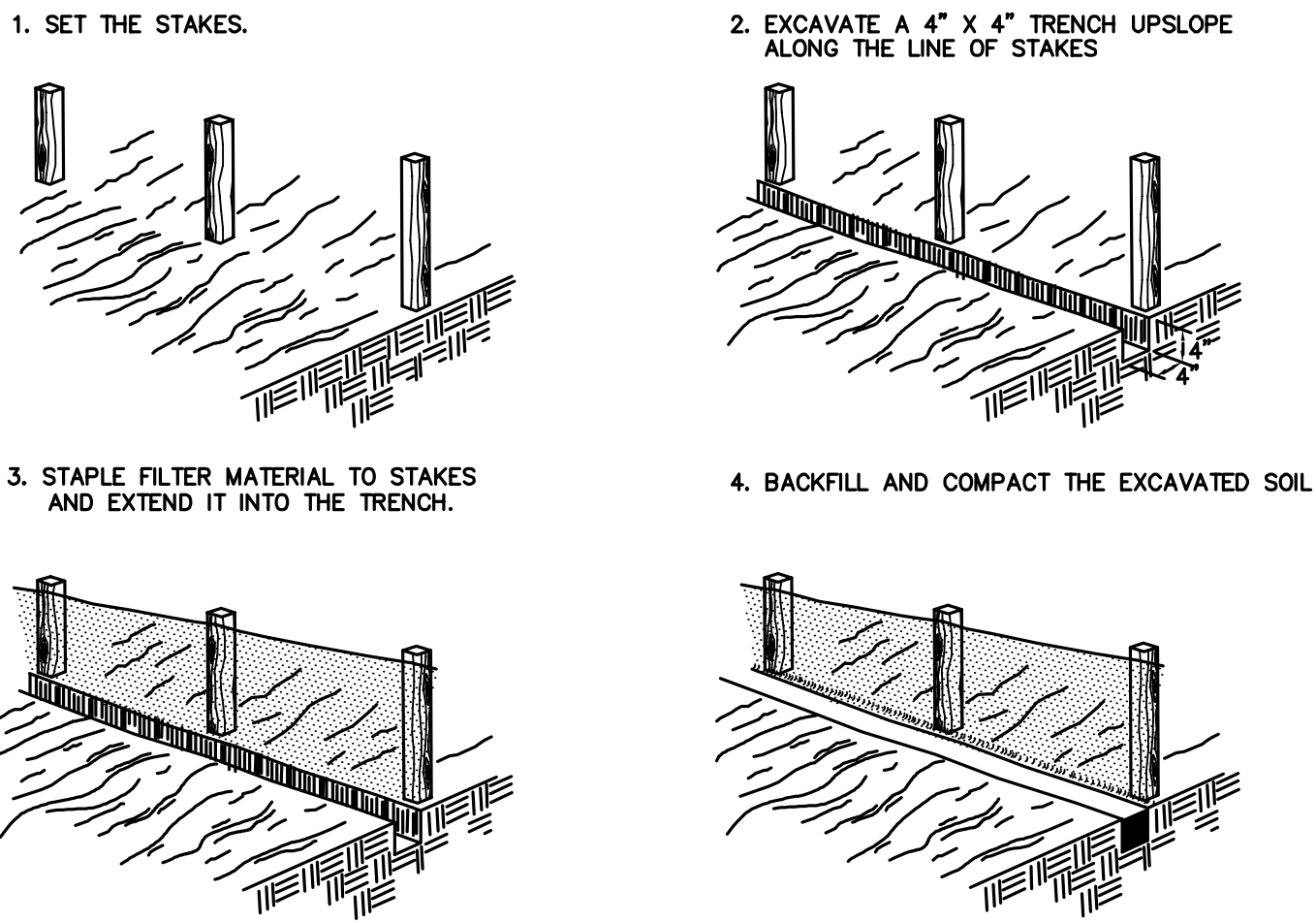
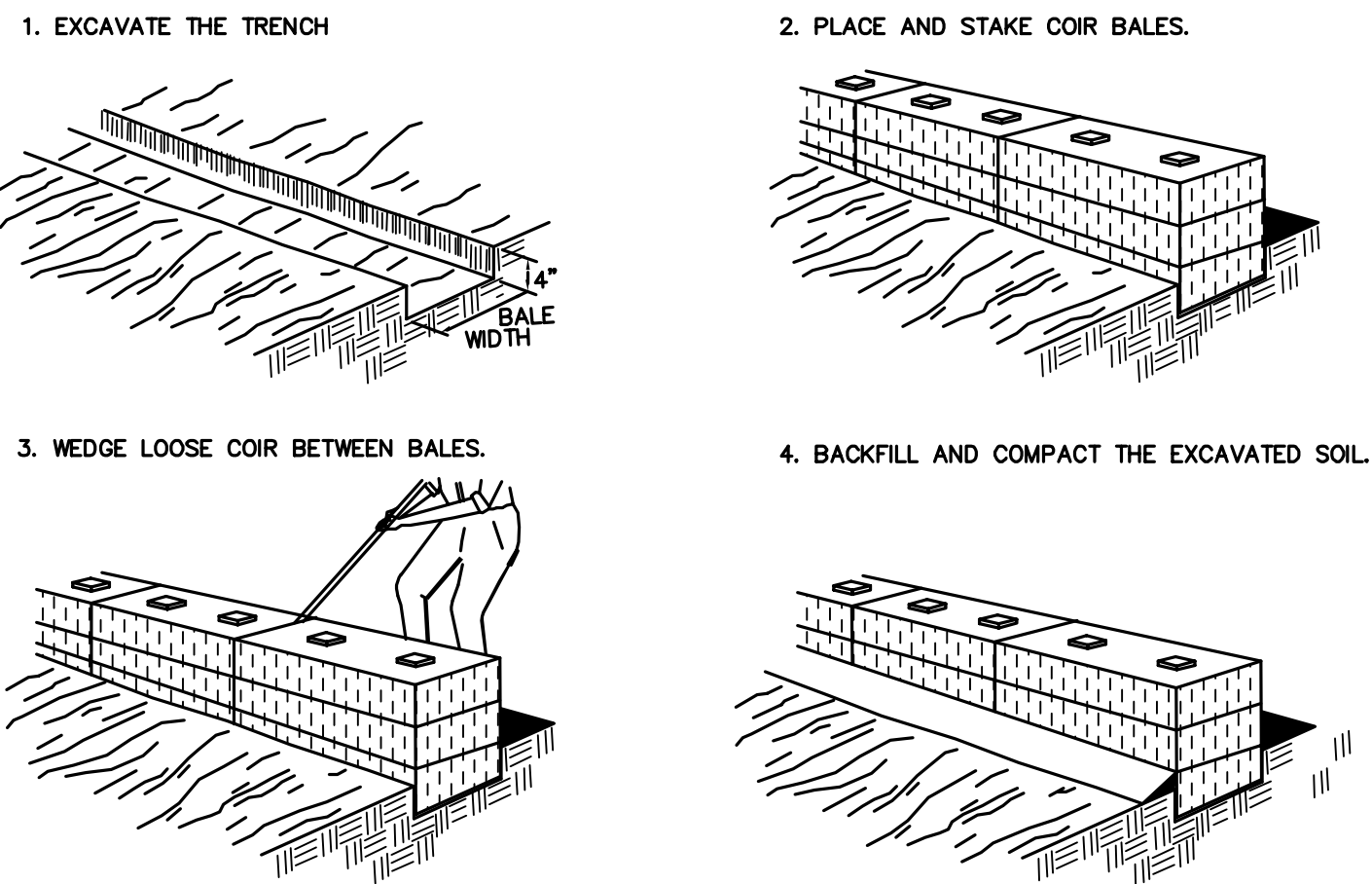
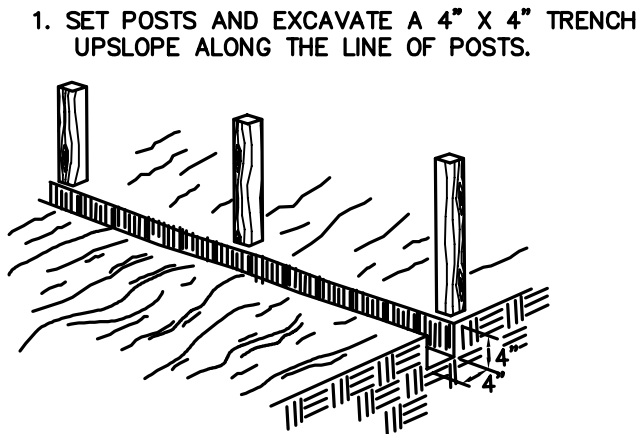
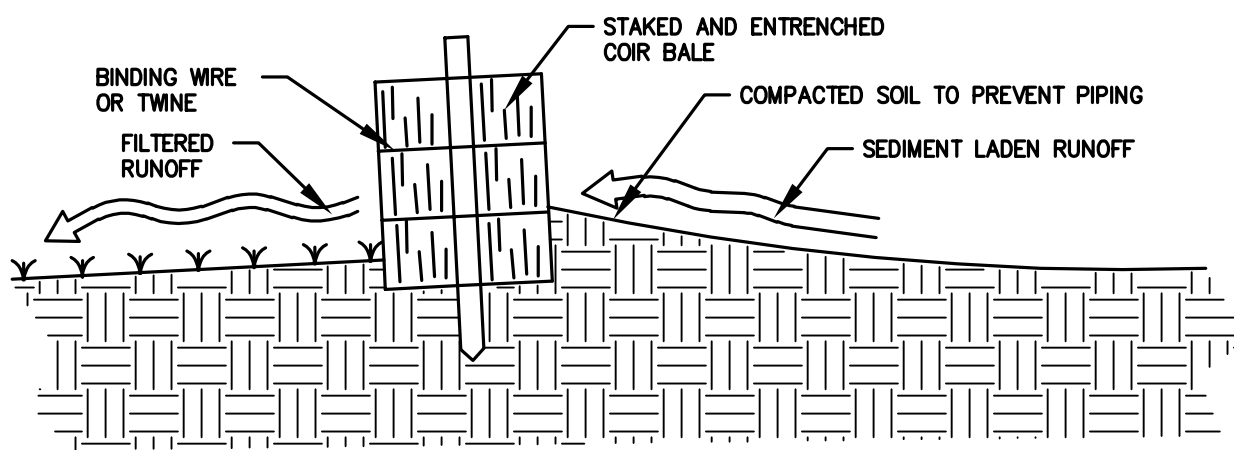
1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
3. ADDITIONAL PROTECTION - ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
5. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS REQUIRED, THE STRIPS SHALL BE OVERLAPPED.
6. FOOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ON SEDIMENT FILTER DETAIL (SEE DETAIL THIS SHEET). THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
7. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
8. BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
9. BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
10. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
11. EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.
12. LOOSE COIR SHOULD BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.
13. COIR BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
14. CLOSE ATTENTION SHALL BE GIVEN TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
15. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
16. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. IT MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
17. ANY SEDIMENT DEPOSITS REMAINING IN PLACE, AFTER THE COIR BALE OR FILTER BARRIERS, AND OR SILT FENCES ARE NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
18. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
19. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
20. STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS REQUIRED.
21. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
22. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT RULES AND REGULATIONS.
23. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (F.D.E.P.) CHAPTER 6.
24. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAILS (THIS SHEET) FOR TYPICAL CONSTRUCTION.
25. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
26. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
27. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
28. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED AND MULCHED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED. CONTRACTOR SHALL USE ADDITIONAL MEASURES TO STABILIZE DISTURBED AREAS THROUGH COMPACTION, SILT SCREENS, COIR BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
29. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL SHALL REMAIN IN PLACE UNTIL AFTER COMPLETION OF CONSTRUCTION, AND REMOVED ONLY WHEN AREAS HAVE BEEN STABILIZED.
30. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
31. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRIES, RELATIVE TO COMPLIANCE OF SURVMD FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.
32. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS AND PRESERVATION EASEMENTS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER THE CONTRACT DOCUMENTS AND MEETING THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, NCDPS AND NPDES FINAL STABILIZATION REQUIREMENTS.
34. THESE PLANS INCLUDING THE POLLUTION PREVENTION PLAN INDICATE THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO

SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.) CHAPTER 6. CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND TURBIDITY CONTROL AS REQUIRED TO INSURE CONFORMANCE TO STATE AND FEDERAL WATER QUALITY STANDARDS AND MAY NEED TO INSTALL ADDITIONAL CONTROLS TO CONFORM TO AGENCIES REQUIREMENTS. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSULTANT FEES, CONSTRUCTION COSTS, AND FINES.

35. 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS. (FOR ANY CONSTRUCTION NOT COVERED BY THE OWNER'S "NOTICE OF INTENT" PERMIT)



THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.



SEDIMENT AND EROSION CONTROL DETAILS

WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
15

REVISIONS:

ETM NO. 19-239-01-005	DESIGNED BY: JZB	CHECKED BY: JZB	DATE: MAY 2024
DRAWN BY: TS	DESIGNED BY: JZB	CHECKED BY: JZB	DATE: MAY 2024

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com
REG-00002584 LC-0000316

Trusted
Advisors,
Creating
Community.

ETM
ENGLAND-THIMS & MILLER

PLANS PREPARED UNDER
THE DIRECTION OF:

JOHN ZACHARY BRECHT
P.E. NUMBER:
66559

PLOTTED: June 28, 2024 - 9:09 AM, BY: Anthony Dornas

OWNER'S REQUIREMENTS

SITE DESCRIPTION

PROJECT NAME AND LOCATION:
MIDLIGHT AVENUE PHASE 4
MIDLIGHT, FLORIDA

OWNER/DEVELOPER NAME AND ADDRESS:
RAYDIENT PLACES + PROPERTIES
1 RAYONIER WAY
MIDLIGHT, FLORIDA 32097
(844) 877-5263

DESCRIPTION:

THIS PROJECT WILL CONSIST OF:
PROPOSED 1500 LF± EXTENSION OF MIDLIGHT AVENUE. CONSTRUCTION WILL CONSIST OF INSTALLATION OF UNDERGROUND UTILITIES, CLEARING, GRADING AND STORMWATER MANAGEMENT FACILITIES.

SOIL DISTURBING ACTIVITIES WILL INCLUDE:
CLEARING AND GRUBBING; INSTALLING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER, AND OTHER EROSION AND SEDIMENT CONTROLS; GRADING; EXCAVATION FOR THE SEDIMENTATION POND, STORM SEWER, UTILITIES, AND BUILDING FOUNDATION; CONSTRUCTION OF CURB AND GUTTER, ROAD, AND PARKING AREAS; AND PREPARATION FOR FINAL PLANTING AND SEEDING.

GENERALIZED RUNOFF CURVE NUMBERS (REFER TO DRAINAGE CALCULATIONS FOR ACTUAL CURVE NUMBER FOR EACH BASIN)

1. PRE-CONSTRUCTION = 79±

2. DURING CONSTRUCTION = 87±

3. POST-CONSTRUCTION = 94±

SOILS:
* SEE ATTACHED FOR SOILS DATA

SITE MAPS:
* SEE ATTACHED DWG. No. 9A – 9C FOR POST DEVELOPMENT GRADES, AREAS OF SOILS, DISTURBANCE, LOCATION OF SURFACE WATERS, WETLANDS, PROTECTED AREAS, MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS AND STORM WATER DISCHARGE POINTS.

* SEE ATTACHED DWG. No. 14 FOR LOCATION OF TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS

SITE AREA:
1. TOTAL AREA OF SITE = 8.26 AC±
2. TOTAL AREA TO BE DISTURBED = 8.26 AC±

NAME OF RECEIVING WATERS: HEADWATERS OF LOFTON CREEK

GENERAL

THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.

SEQUENCE OF MAJOR ACTIVITIES:

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE

2. INSTALL SILT FENCES AND COIR BALES AS REQUIRED

3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN

4. CONSTRUCT SEDIMENTATION BASIN

5. CONTINUE CLEARING AND GRUBBING

6. STOCK PILE TOP SOIL IF REQUIRED

7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED

8. STABILIZE DENUDEED AREAS AND STOCKPILES AS SOON AS PRACTICABLE

9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER.

10. APPLY BASE TO PARKING AREAS

11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING

12. COMPLETE FINAL PAVING

13. REMOVE ACCUMULATED SEDIMENT FROM BASINS

14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED

NOTE: VERTICAL CONSTRUCTION OF THE BUILDING WILL BE TAKING PLACE DURING ALL THE SEQUENCE STEPS LISTED ABOVE

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND COIR BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKE/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN

CONTROLS

THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. DWG. No. 14 HAVE BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS AS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTORS REQUIREMENTS" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.

AREAS WHICH ARE NOT DEVELOPED BUT WILL BE REGRADED SHALL BE STABILIZED IMMEDIATELY AFTER GRADING IS COMPLETE.

EROSION AND SEDIMENT CONTROLS
STABILIZATION PRACTICES

1. COIR BALE BARRIER: COIR BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.
C. WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS.
D. EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF COIR BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT. IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT.

2. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.

3. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.

4. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE.

5. STOCKPIILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY.

6. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.

REFER TO " CONTRACTORS REQUIREMENTS" FOR THE TIMING OF CONTROL/MEASURES.

CERTIFICATION OF COMPLIANCE WITH
FEDERAL, STATE AND LOCAL REGULATIONS

IN AN EFFORT TO ENSURE COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS REGARDING EROSION AND TURBIDITY CONTROLS, THE FOLLOWING PERMITS HAVE BEEN OBTAINED.

D.E.P. DREDGE/FILL PERMIT #

C.O.E. DREDGE/FILL PERMIT #

S.J.R.W.M.D. M.S.S.W. PERMIT #

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNED: _____

TITLE: _____
CORPORATE OFFICER, GENERAL PARTNER, PROPRIETOR, EXECUTIVE OFFICER, OR RANKING ELECTED OFFICIAL

DATE: _____

CONTRACTOR'S REQUIREMENTS

INVENTORY FOR POLLUTION PREVENTION PLAN

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

Concrete

Fertilizers

Wood

Asphalt

Petroleum Based Products

Masonry Blocks

Tar

Cleaning Solvents

Roofing Materials

Detergents

Paints

Metal Studs

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES
THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING
THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.

* AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.

* ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.

* PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.

* SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.

* WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.

* MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.

* THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.

HAZARDOUS PRODUCTS
THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

* PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.

* ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.

* IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

PRODUCT SPECIFIC PRACTICES
THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:

PETROLEUM PRODUCTS
ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS
FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE MIXED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINTS
ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS
CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (I.e. KITTY LITTER OR EQUAL), SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.

THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.

OTHER CONTROLS

WASTE DISPOSAL
WASTE MATERIALS
ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE
ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE
ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.

OFFSITE VEHICLE TRACKING
A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEP DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM TRUCKS DURING TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

MAINTENANCE/INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES
THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

* NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUDE AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.

* ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.50 INCHES OR GREATER.

* ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.

* BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.

* SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.

* THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB.

* DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.

* TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.

* A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM SHALL BE COMPLETED BY THE INSPECTOR
THE REPORTS SHALL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND EROSION PLANS, OR STORM WATER MANAGEMENT PLANS.
THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND THE NOTICE OF TERMINATION IS SUBMITTED. THE REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.

* THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.

* PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.

NON-STORM WATER DISCHARGES

* IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

* WATER FROM WATER LINE FLUSHING

* PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).

* UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION).

ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.

CONTRACTOR'S CERTIFICATION
I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

DEWATERING

PRIOR TO ANY DISCHARGE OF GROUND WATER (DEWATERING) FROM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT TO WATERS OF THE STATE (INCLUDING, BUT NOT LIMITED TO, WETLANDS, SWALES AND MUNICIPAL STORM SEWERS), THE CONTRACTOR SHALL TEST THE EFFLUENT (WATER TO BE DISCHARGED) IN ACCORDANCE WITH RULE 62-621.300(2), F.A.C. IF THE TEST RESULTS ON THE EFFLUENT ARE BELOW THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL SUBMIT A SUMMARY OF THE PROPOSED CONSTRUCTION ACTIVITY AND THE TEST RESULTS TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DISTRICT OFFICE, WITHIN ONE (1) WEEK AFTER DISCHARGE BEGINS. THE CONTRACTOR SHALL CONTINUE TO SAMPLE THE EFFLUENT AS REQUIRED THROUGHOUT THE PROJECT AND COMPLY WITH ALL CONDITIONS OF RULE 62-621.300(2), F.A.C. IF THE GROUND WATER EXCEEDS THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL COMPLY WITH OTHER APPLICABLE RULES AND REGULATIONS PRIOR TO DISCHARGE OF THE EFFLUENT (GROUND WATER) TO SURFACE WATERS OF THE STATE.

SIGNATURE

BUSINESS NAME AND ADDRESS
OF CONTRACTOR & ALL SUBS

RESPONSIBLE FOR/DUTIES

GENERAL CONTRACTOR

SUB-CONTRACTOR

SUB-CONTRACTOR

SUB-CONTRACTOR

SUB-CONTRACTOR

PLANS PREPARED UNDER
THE DIRECTION OF:

JOHN ZACHARY BRECHT
P.E. NUMBER:
66559

REVISIONS:

ETM NO. 19-239-01-055

DRAWN BY: TS

DESIGNED BY: JZB

CHECKED BY: JZB

DATE: MAY 2024

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com
REC- 00002584

Trusted
Advisors,
Creating
Community.
ENGLAND-THIMS & MILLER

ETM

STORMWATER POLLUTION PREVENTION
PLAN
WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
16

PLOTTED: June 28, 2024 - 9:09 AM, BY: Anthony Dornas

T:\2019\19-239-01 - Rayonier Work\19-239-01-055 Midlight Avenue Extension\Landdev Design\Photos SWPPP-19-239-01-055.dwg

WILDLIGHT AVENUE PHASE 4

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

THIS IS THE CONTRACTORS CERTIFICATION REQUIRED BY THE EPA'S NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES). STORM WATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION SITES OVER 1.0 ACRES. THIS CERTIFICATION MUST BE COMPLETED WEEKLY AND AFTER EVERY RAINFALL EVENT OF 0.50 INCHES OR GREATER.

INSPECTOR: _____

INSPECTOR'S QUALIFICATIONS:

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL: _____ INCHES

STABILIZATION MEASURES

INSPECTION AREA (DESCRIPTION OF LOCATION)	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED ? (YES/NO)	STABILIZED WITH	CONDITION

STABILIZATION REQUIRED:

TO BE PERFORMED BY: _____ ON OR BEFORE _____

PAGE 1 OF 4

WILDLIGHT AVENUE PHASE 4

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

SEDIMENT BASIN

DEPTH OF SEDIMENT IN BASIN	DEPTH OF SEDIMENT SIDE BASIN	ANY EVIDENCE OF OVERTOPPING OF THE EMBANKMENT ?	CONDITION OF OUTFALL FROM SEDIMENT BASIN

MAINTENANCE REQUIRED FOR SEDIMENT BASIN:

TO BE PERFORMED BY: _____ ON OR BEFORE _____

OTHER CONTROLS

STABILIZED CONSTRUCTION ENTRANCE

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD ?	IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT?	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE ? (IF APPLICABLE)	IS THE CULVERT BENEATH THE ENTRANCE WORKING? (IF APPLICABLE)

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE:

TO BE PERFORMED BY: _____ ON OR BEFORE _____

PAGE 3 OF 4

WILDLIGHT AVENUE PHASE 4

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

STRUCTURAL CONTROLS

DATE: _____

EARTH DIKES/SWALES

DIKE OR SWALE	FROM	TO	IS DIKE/SWALE STABILIZED ?	IS THERE EVIDENCE OF EROSION, SLIDING, OR OVERTOPPING

MAINTENANCE REQUIRED FOR EARTH DIKE/SWALE:

TO BE PERFORMED BY: _____ ON OR BEFORE _____

CATCH BASIN/CURB INLET/OUTFALL TURBIDITY CONTROLS

STRUCTURE/ OUTFALL	ARE TURBIDITY CONTROLS IN PLACE	ANY EVIDENCE OF CLOGGING/WASHOUT OR BYPASSING ?	ARE TURBIDITY CONTROLS IN NEED OF REPLACING	DOES SILT NEED TO BE REMOVED FROM AROUND CONTROL

MAINTENANCE REQUIRED FOR CATCH BASIN/CURB INLETS/OUTFALLS TURBIDITY CONTROLS:

TO BE PERFORMED BY: _____ ON OR BEFORE _____

PAGE 2 OF 4

WILDLIGHT AVENUE PHASE 4

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

REASONS FOR CHANGES:

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY PERSONAL SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER. I HAVE ADVISED ALL PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE AND CORRECT. I HAVE NOT BEEN INFLUENCED BY ANY PERSONS OR ENTITIES IN OBTAINING OR PREPARING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

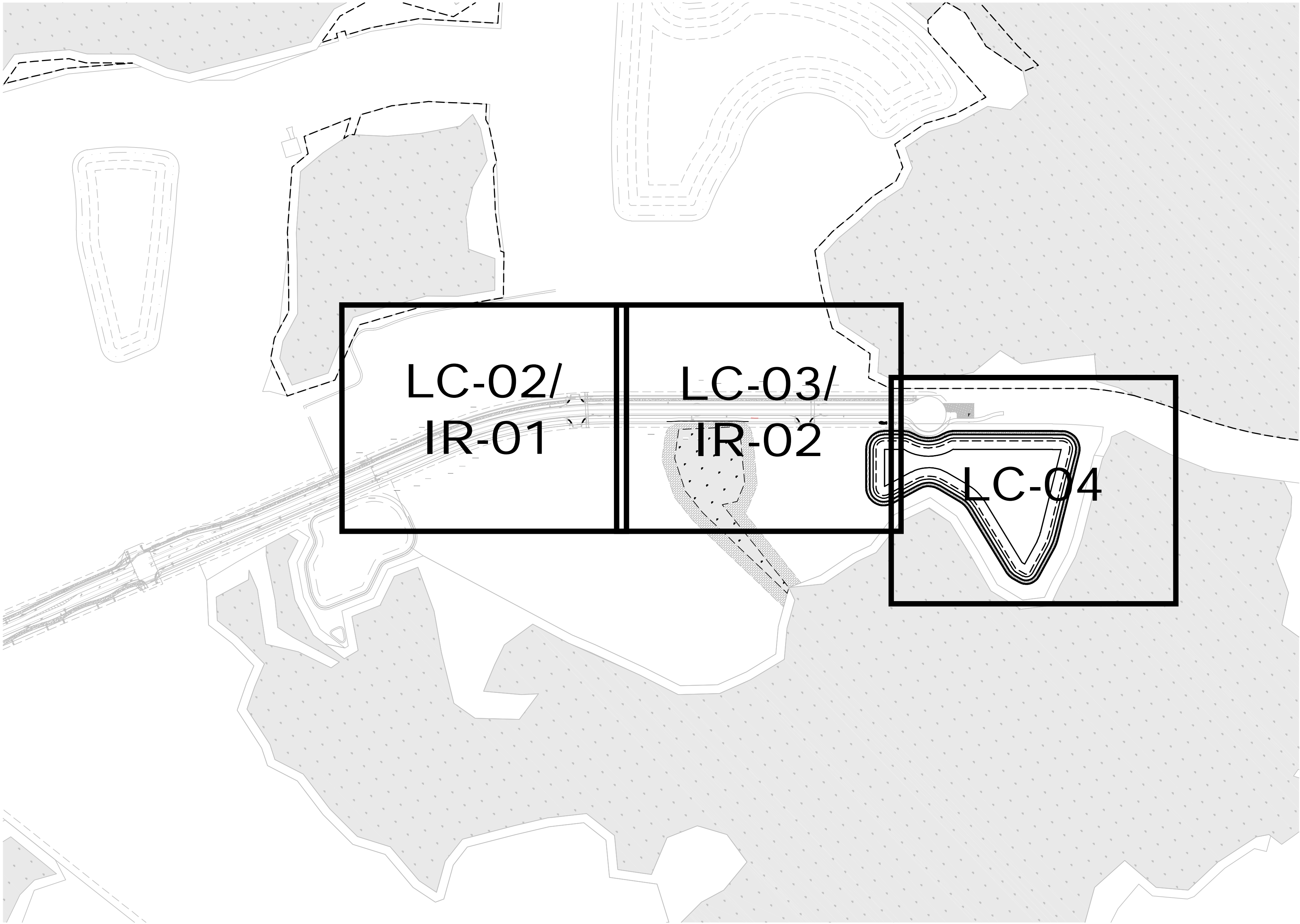
SIGNATURE: _____

DATE: _____

PAGE 4 OF 4

WILDLIGHT AVENUE PHASE 4

LANDSCAPE ARCHITECTURE DOCUMENTS



INDEX PLAN

LANDSCAPE SHEET INDEX:

SHEET NO.:	DRAWING DESCRIPTION
LC-00	LANDSCAPE COVER
LC-01	LANDSCAPE CODE SUMMARY
LC-02	LANDSCAPE PLAN
LC-03	LANDSCAPE PLAN
LC-04	LANDSCAPE PLAN
LC-05	LANDSCAPE NOTES
LC-06	LANDSCAPE SPECIFICATIONS AND DETAILS
IR-01	IRRIGATION PLAN
IR-02	IRRIGATION PLAN
IR-03	IRRIGATION CODE SUMMARY AND NOTES
HS-00	HARDSCAPE COVER
HS-01	HARDSCAPE PLAN
HS-02	HARDSCAPE PLAN
HS-03	HARDSCAPE DETAILS

PLANS PREPARED UNDER THE DIRECTION OF:
JONATHAN F. KORMAN, PLA
L.A. NUMBER: LA6867357

REVISIONS:
ETM NO. 19-239-01-055
DRAWN BY: L.L.
DESIGNED BY: L.L.
CHECKED BY: J.F.K.
DATE: MAY 2024

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com
REG-00002584 LC-0000316

Trusted
Advisors,
Creating
Community

ETM
ENGLAND-THIMS & MILLER

LANDSCAPE COVER
WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
LC-00



KNOW WHAT'S BELOW
ALWAYS CALL 811
BEFORE YOU DIG
It's fast. It's free. It's the law.
www.callsunshine.com

T:\2019\19-239\19-239-01 - Royentier Work\19-239-01-055 Wildlife Avenue Extension\Landscapes\Plot\19-239-01-055_LC_PLOT.dwg

LANDSCAPE CODE SUMMARY

REFERENCE	DESCRIPTION	NOTES/ COMPLIANCE?	REFERENCE	DESCRIPTION	NOTES/ COMPLIANCE?	REFERENCE	DESCRIPTION	NOTES/ COMPLIANCE?	REFERENCE	DESCRIPTION	NOTES/ COMPLIANCE?
Section 37.05. – LANDSCAPING											
37.05.B	All installed trees, shrubs and groundcovers shall conform to the standards for Florida Grade #1 or better according to the current edition of "Grades and Standards for Nursery plants" published by the Florida Department of Agriculture and Consumer Services, Division of Plant Industry.	YES	37.05.D.1	A1A/S.R. 200, U.S. Highway 1 and U.S. 301. A strip parallel to the right-of-way line having an average width of twenty-five (25) feet and a minimum width of ten feet along the entire street frontage except for permitted driveways. This perimeter landscaping strip shall contain a minimum of three (3) canopy trees per one hundred (100) linear feet of property frontage and three (3) understory trees per one hundred (100) linear feet of property frontage. The canopy trees shall consist of more than one (1) species listed in Tables 37-1 or 37-2. Planted trees are not meant to be spaced evenly but rather randomly distributed by species.	YES	37.05.E.1	At the intersection of two (2) streets, all landscaping within that area defined by the Florida Department of Transportation sight triangle, as outlined in the FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System shall be installed and maintained below three (3) feet in height or above eight (8) feet in height.	YES	37.05.H.3	Turf grass areas should be consolidated and limited to those areas on the site that receive pedestrian traffic, provide for recreational uses, provide soil erosion control such as berms, slopes and swales, where turf grass is used as a design unifier or other similar practical use.	YES
37.05.B.1	The minimum number of trees required by this section shall be either qualifying existing trees preserved on-site or more than one species listed in Tables 37-1 or 37-2. new landscaping should not include more than fifty (50) percent of any one genus or twenty-five (25) percent of any one species. All trees shall be planted in a minimum dimension of ten (10) feet. This minimum planting area must be free of all pavement and vehicle overhang in order to prevent possible tree damage.	YES				37.05.E.2	When a driveway intersects a right-of-way, clear unobstructed cross visibility shall be provided within the site triangle formed by such intersection. The sight triangle shall be measured from the point of intersection, fifteen (15) feet along the access way and then fifteen (15) feet along the right-of-way, with the third side being a line connecting the two (2) points. Cross visibility within the sight triangle shall be unobstructed between the height of three (3) feet and eight (8) feet measured from the ground line. Trees and palms shall have their foliage trimmed in a manner that no limbs or foliage will extend in to the cross visibility area. To ensure proper visibility at the intersection of access ways with public rights-of-way, excluding properly trimmed trees as previously stated; only ground cover type plants shall be allowed within a sight triangle.	YES	37.06.4.a	Medium and fast growing canopy trees shall be chosen from Table 37-1 having a dense, evergreen crown to provide maximum visual separation between abutting properties.	YES
37.05.B.2	Shrubs shall have a minimum height of eighteen (18) inches when planted. When planted as a hedge, the maximum spacing is 30 inches on center. All shrubs used for visual screening shall be of a plant species that is capable of reaching a height of four (4) feet within twenty-four (24) months under normal growing conditions. Shrubs used as accent ground cover and vines may vary in size depending on the type of plant material and the desired effect.	YES	37.05.D.2	Other arterial and collector roadways. All other arterial and collector roadways, as identified by the comprehensive plan, shall provide a strip parallel to the right-of-way line having an average width of fifteen (15) feet and a minimum width of seven and one-half (7½) feet along the entire street frontage except for permitted driveways. This perimeter landscaping strip shall contain a minimum of three (3) canopy trees per one hundred (100) linear feet of property frontage and three (3) understory trees per one hundred (100) linear feet of property frontage. The canopy trees shall consist of more than one species listed in Tables 37-1 or 37-2. Planted trees are not meant to be spaced evenly but rather randomly distributed by species within the largest open spaces.	N/A	37.05.F.1	Except for one- and two-family dwellings, all off-street parking areas shall contain interior landscaping islands at a ratio of one (1) island for each ten (10) parking spaces. Rows of parking spaces abutting a sidewalk adjacent to a building are exempt from required landscape islands except for terminal islands at the end of each row.	YES	37.06.4.b	Shrubs shall be spaced to provide a natural appearance and inhibit free movement of pedestrian traffic except at a mutually agreed upon pedestrian connection. Where screening is proposed consisting of a fence or wall, shrubs are not required.	YES
37.05.B.3	Groundcovers shall be planted in such manner as to present a finished appearance and complete coverage within one (1) year after planting.	YES							37.06.4.c	Where screening is required, it shall consist of one or more of the following materials: A five (5) foot masonry wall stuccoed on the side facing the abutting property; A solid six (6) foot fence constructed of resistant materials such as vinyl, cypress or pressure treated wood; Existing dense vegetation; A berm three (3) feet in height located entirely within the buffer and having the requisite number of shrubs planted along the crown.	N/A
37.05.B	All tree planted shall be staked or guyed for a period of at least six (6) months in accordance with the adopted planting detail.	YES	37.05.D.3	Local streets. A strip parallel to the street line having a minimum width of ten (10) feet along the entire street frontage except for permitted driveways. This perimeter landscaping strip shall contain a minimum of two (2) canopy trees per one hundred (100) linear feet of property frontage and three (3) understory trees per one hundred (100) linear feet of property frontage. The canopy trees shall consist of more than one species listed in Tables 37-1 or 37-2.	YES	37.05.F.2	Each separate interior landscaped island shall contain a minimum of one hundred sixty-six (166) square feet and shall be at least ten (10) feet wide as measured from back of curb. A minimum of one (1) canopy tree shall be planted in each interior landscaping island.	YES			
37.05.C.1	One and two-family dwellings. Each single-family and two-family lot must provide at least one (1) tree per three thousand (3,000) square feet of lot area for the first quarter acre of lot area. For lots exceeding one-quarter (¼) acre, one (1) tree for every additional one-quarter (¼) acre, or major fraction thereof, must be preserved or planted. Existing canopy trees, sabal palms and pine trees may be used to satisfy this requirement, in whole or in part, provided that they have a minimum caliper of four (4) inches DBH. When trees are planted to meet the minimum requirement they must be more than one species of tree listed in Tables 37-1 or 37-2 and meeting the material standards of this section. The foregoing represent the entire requirement applicable to individual one and two-family dwellings.	N/A	37.05.D.5	Except for one- and two-family dwellings, all off-street parking areas, drive aisles, and paved storage areas lying within fifty (50) feet of, and visible from any street right-of-way, the perimeter landscaping requirement of this section shall also include shrubs	N/A	37.05.H.2	Fifty (50) percent of the plants used in all vehicular use area landscape designs should be drought tolerant and located in groupings according to zones designated by the water requirements.	YES			
		N/A				37.05.K	The property owner is responsible for the maintenance of all landscape areas required by this section. Maintenance includes irrigating, mowing, trimming, fertilizing and carrying out those activities necessary to keep the plant material in a healthy and growing condition, maintain visual clearance and allow passage of vehicles and pedestrians on public roads and non-exclusive easements.	YES			
37.05.C.2	Multi-family, mobile home park and travel trailer parks. In addition to the use buffer and perimeter landscaping adjacent to a right-of-way requirements found in this section, each multi-family, mobile home park and travel trailer park must plant or preserve an additional one tree for every two (2) dwelling units. When trees are planted to meet the minimum requirement they must be more than one species of tree listed in Tables 37-1 or 37-2 and meeting the material standards of this section.	N/A	37.05.D.6	Dumpsters and mechanical equipment shall be screened through the use of a wall, which is one hundred (100) percent opaque in conjunction with landscaping. Minimum landscaping shall include one (1) shrub every two (2) feet. The shrub shall be maintained at a minimum of four (4) feet in height. One (1) canopy tree or understory tree per ten (10) linear feet of wall or fence unless said fence or wall is less than eight (8) feet in length. Where a transformer pad is located along a public right-of-way, it shall be screened using a hedge meeting the standards of section 37.05.B.2 of this Code along the sides visible from the right-of-way.	N/A	37.05.K.1	Upon determination by the county that a required tree or plant is dead or severely damaged or diseased, the tree or plant shall be replaced by the owner with plant material meeting the requirements of this section.	YES			
37.05.C.3	Non-residential developments. In addition to the buffer and perimeter landscaping adjacent to a right-of-way requirements found in this section, each commercial and/or industrial development must provide a minimum of ten (10) percent of the lot or parcel as pervious green space planted with one or more species of tree listed in Tables 37-1 or 37-2 for every five hundred (500) square feet of such green space.	YES	37.05.D.7	Use of understory trees (ref. Table 37-4 LDC) are permitted in lieu of native canopy trees listed in Table 37-1 and 37-2 as determined to be practical by the director of planning and economic opportunity or designee because of overhead utility lines or other overhead restrictions that cannot otherwise be mitigated through design modifications. Understory trees may be permitted at a rate of one (1) tree for every fifteen (15) feet of site/lot frontage along the right-of-way or street. At the time of planting, Crape Myrtles shall be a minimum of eight (8) feet in height and measure three (3) caliper inches if a single trunk or an aggregate of six (6) inches if a multi-trunk.	YES	37.05.K.2	All buffer areas required as part of a development plan, whether in common or private ownership, shall be the responsibility of that development's property owners' association. Where there is no property owners' association, such landscaped areas shall be the responsibility of the property owner.	YES			
37.05.D	The use of a wall or fence is permitted provided the wall or fence is located on the inner most boundary (behind the vegetation as viewed from outside the development) of the perimeter landscaping adjacent to rights-of-ways/streets, required uncomplimentary land use buffer or other landscaped area.	N/A	37.05.D.10	Back flow preventer(s) and lift stations shall generally be to the side or rear of a building. Where they cannot be placed at the side or rear of a building, it shall be screened from public rights-of-way through the use of shrubs planted as a hedge meeting the standards of section 37.05.B.2 of the Code.	YES	37.05.K.3	Trees on developed properties may be pruned to maintain shape and promote their shade-giving qualities. They should be pruned to remove diseased or dying portions in areas where falling limbs could be a hazard to people or property. Lower limbs may be removed to provide clearance. In addition, trees located in association with vehicular use areas shall also be pruned to allow a seven-foot clearance from ground level to avoid potential for damage or injury to pedestrians and cleared to thirteen (13) above pavement level for vehicles. However, the excessive pruning or pollarding of trees into round balls of crown or branches resulting in an unnecessary reduction of shade is prohibited and may require supplemental plantings. All pruning shall be done following the American National standard for Tree Care Operations "Tree, Shrub and Other Woody Plant Maintenance – Standard Practices."	YES			

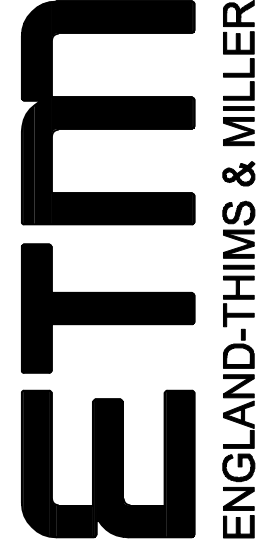
PLANS PREPARED UNDER THE DIRECTION OF:

JONATHAN F. KORMAN, PLA
L.A. NUMBER: LA8667357

REVISIONS:

ETM NO. 19-239-01-055	DRAWN BY: L.L.	DESIGNED BY: L.L.	CHECKED BY: J.F.K.	DATE: MAY 2024
-----------------------	----------------	-------------------	--------------------	----------------

Trusted Advisors, Creating Community.



ENGLAND-THIMS & MILLER

LANDSCAPE CODE SUMMARY

WILDLIGHT AVENUE PHASE 4

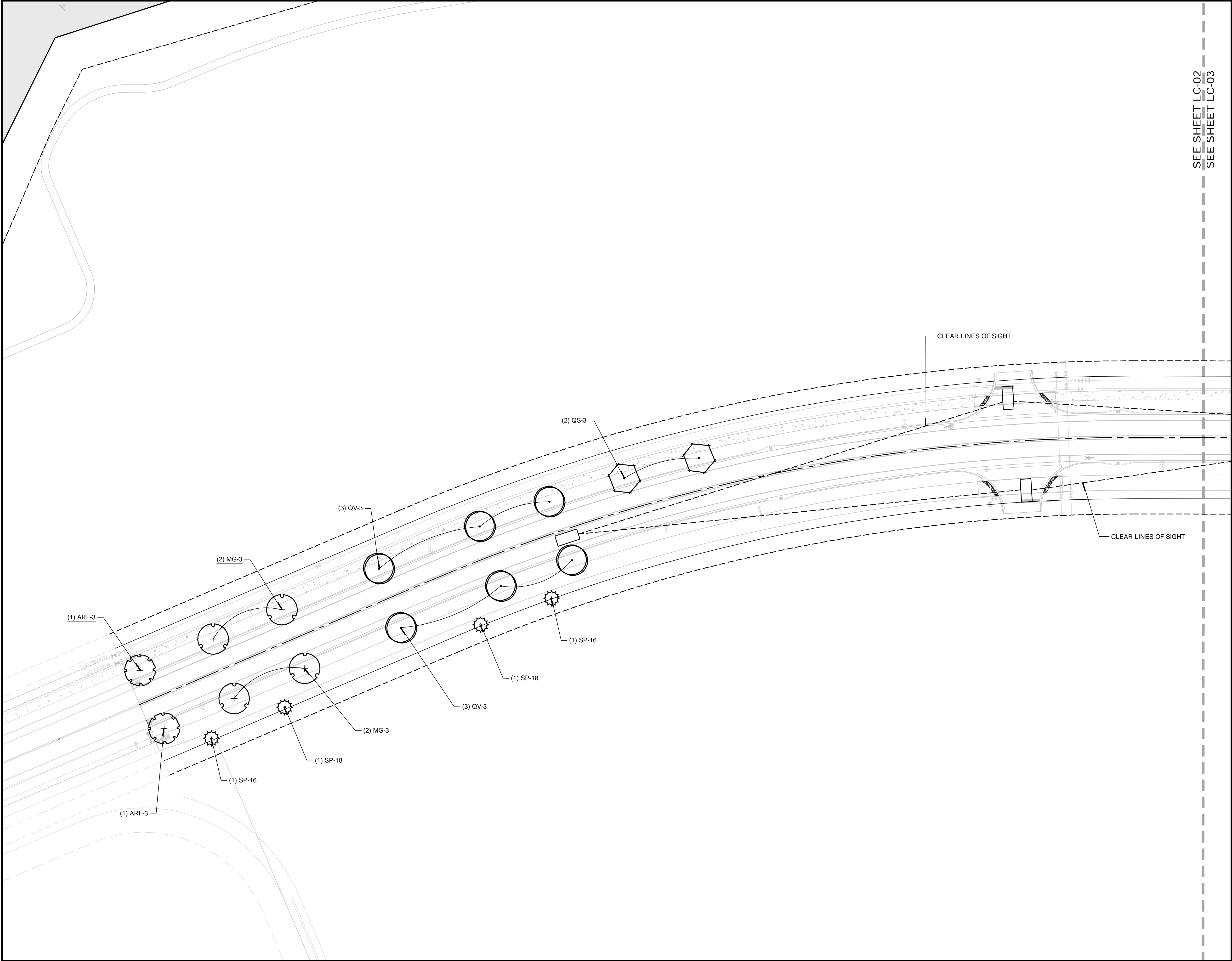
FOR: RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
LC-01

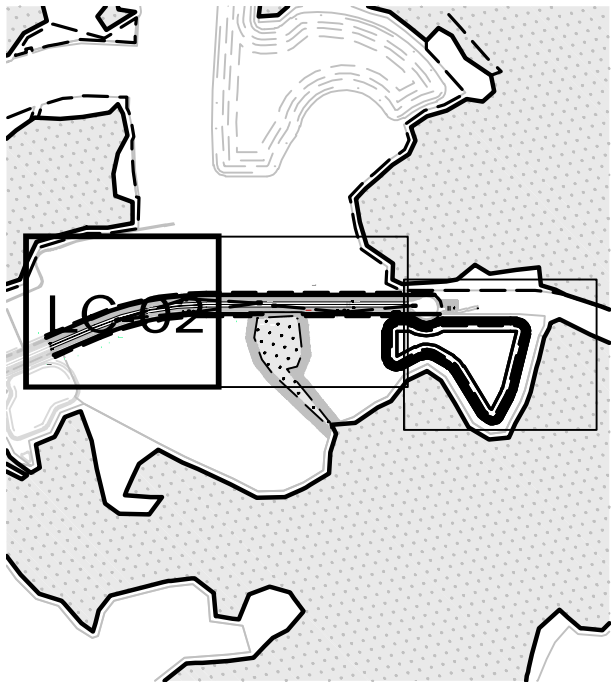
14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com
REG- 00002584 LC-0000316

PLOTTED: June 25, 2024 – 9:10 AM, BY: Anthony Dornes

T:\2019\19-239\19-239-01 - Royentier Work\19-239-01-055 Wildlight Avenue Extension\Landscapa\Pla\19-239-01-055_LC_PLOT1.dwg



SEE SHEET LC-02
SEE SHEET LC-03



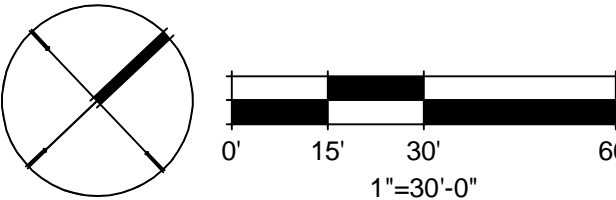
KEY MAP

N.T.S.

PLANT LEGEND

SYMBOL	CODE	COMMON NAME
LARGE TREES		
	ARF-3	FLORIDA FLAME RED MAPLE
	LT-3	TULIP TREE
	MG-3	SOUTHERN MAGNOLIA
	QS-3	SHUMARD RED OAK
	QV-3	SOUTHERN LIVE OAK
PALM TREES		
	SP-16	CABBAGE PALMETTO
	SP-18	CABBAGE PALMETTO

NOTE:
ADDITIONAL LANDSCAPING ALONG WILDLIGHT AVENUE TO BE PROVIDED WHEN ADJACENT PROPERTIES ARE DEVELOPED.



KNOW WHAT'S BELOW
ALWAYS CALL 811
BEFORE YOU DIG
It's fast. It's free. It's the law.
www.callsunshine.com

LANDSCAPE PLAN
WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
LC-02

Trusted
Advisors,
Creating
Community.

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com
REG-00002584 LC-0000316

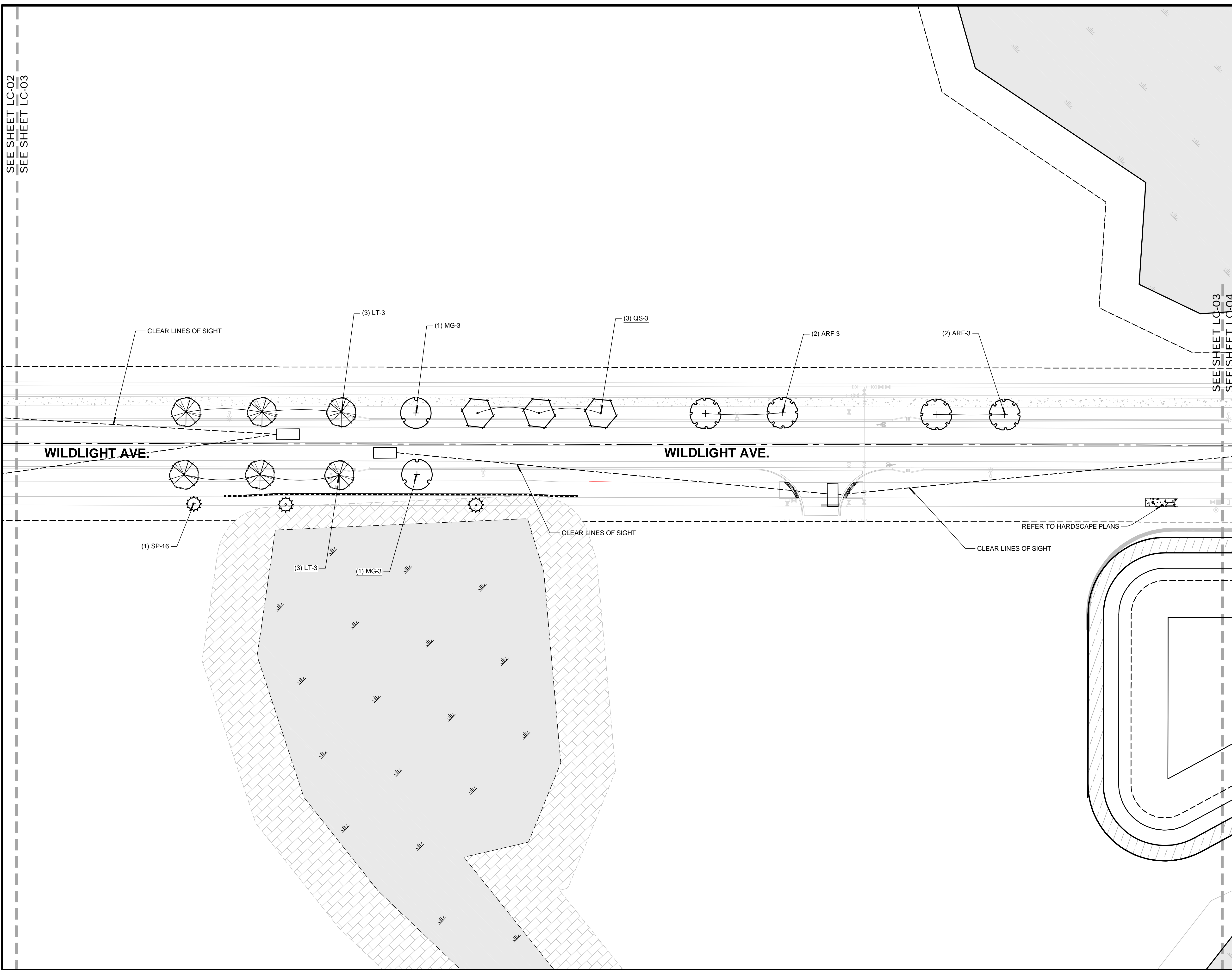
ETM
ENGLAND-THIMS & MILLER

PLANS PREPARED UNDER
THE DIRECTION OF:
JONATHAN F. KORMAN, PLA
L.A. NUMBER: LA6867357
PLOTTED: June 28, 2024 - 9:10 AM, BY: Anthony Dornes

REVISIONS:

ETM NO. 19-239-01-055	DRAWN BY: L.L.	DESIGNED BY: L.L.	CHECKED BY: J.F.K.	DATE: MAY 2024
-----------------------	----------------	-------------------	--------------------	----------------






SEE SHEET LC-02
SEE SHEET LC-03





KEY MAP

N.T.S.

PLANT LEGEND

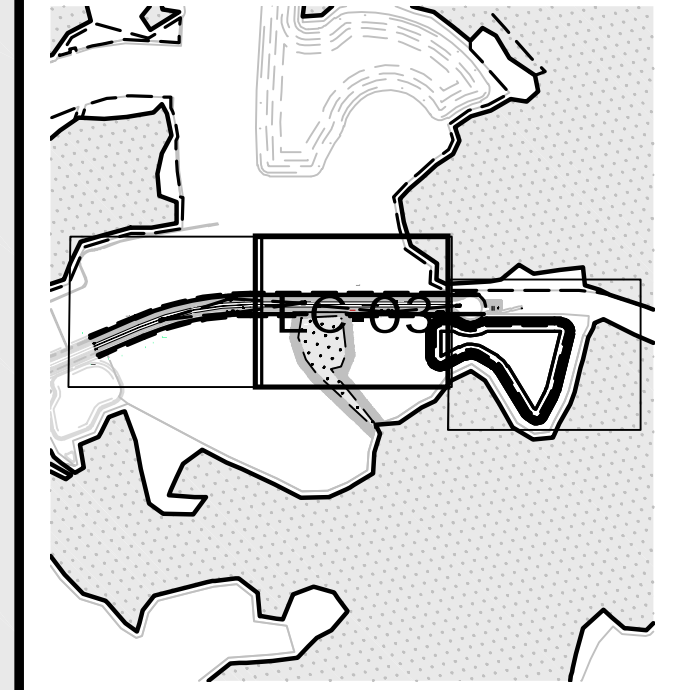
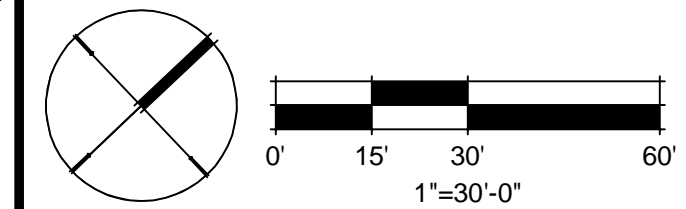
SYMBOL	CODE	COMMON NAME
<u>LARGE TREES</u>		
	ARF-3	FLORIDA FLAME RED MAPLE
	LT-3	TULIP TREE
	MG-3	SOUTHERN MAGNOLIA
	QS-3	SHUMARD RED OAK
	QV-3	SOUTHERN LIVE OAK

PALM TREES

	SP-16	CABBAGE PALMETTO
	SP-18	CABBAGE PALMETTO

NOTE:

ADDITIONAL LANDSCAPING ALONG WILDLIGHT AVENUE TO BE PROVIDED WHEN ADJACENT PROPERTIES ARE DEVELOPED.



LANDSCAPE PLAN

**WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES**

DRAWING NUMBER
LC-03

REVISIONS:

14775 Old St. Augustine Rd.

Trusted
Advisors,
Creating
Community.

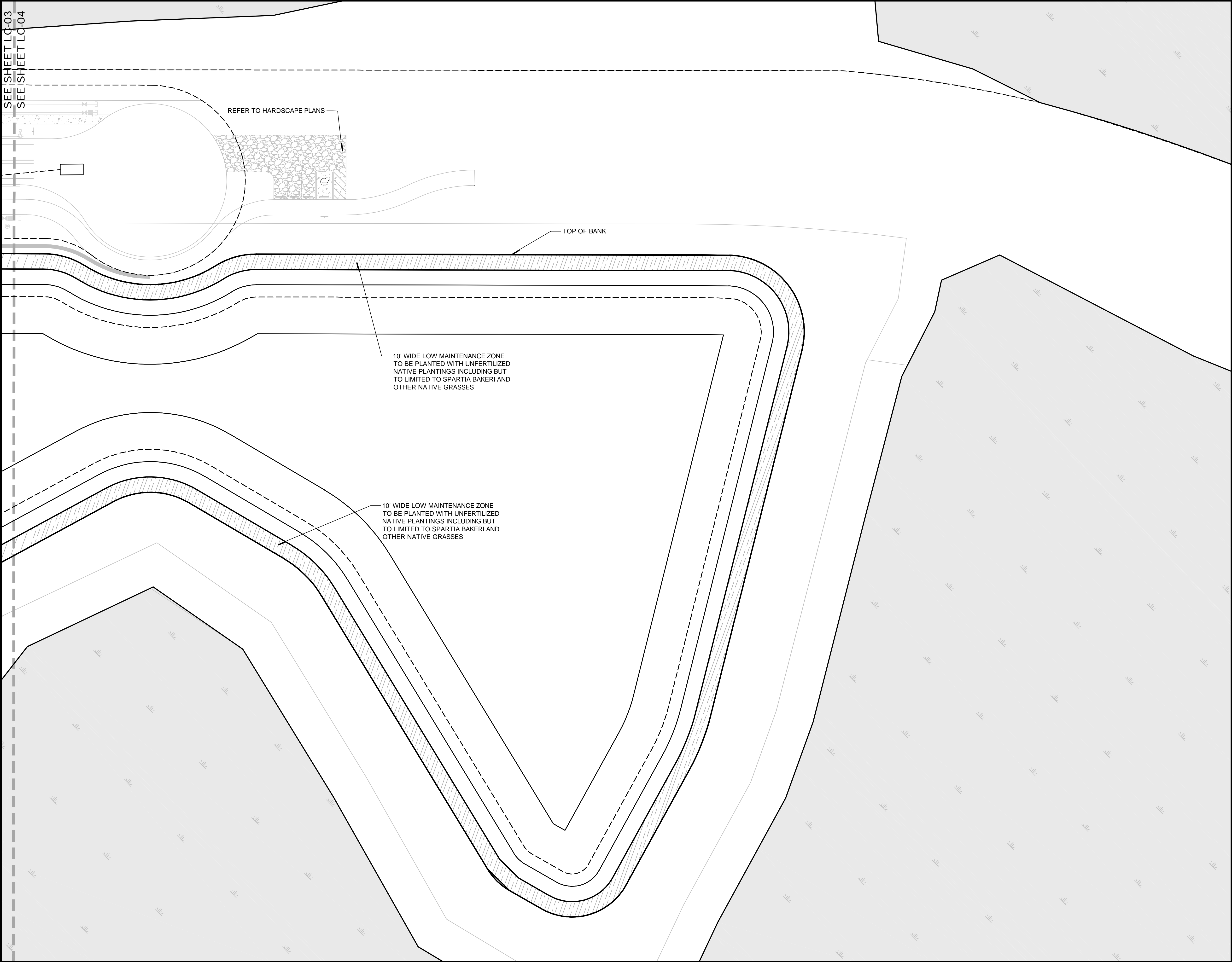
ETM
ENGLAND-THIMS & MILLER

PLANS PREPARED UNDER
THE DIRECTION OF:

JONATHAN F. KORMAN, PL
L.A. NUMBER: LA666735

PLOTTED: June 28, 2024 - 9:10 AM, BY: Anthony Dornes

T: \\2019\\19-239\\19-239-01 - Rayonier Work\\19-239-01-055 Wildlight Avenue Extension\\Landscape\\Plot\\19-239-01-055_LC_PLOT.dwg



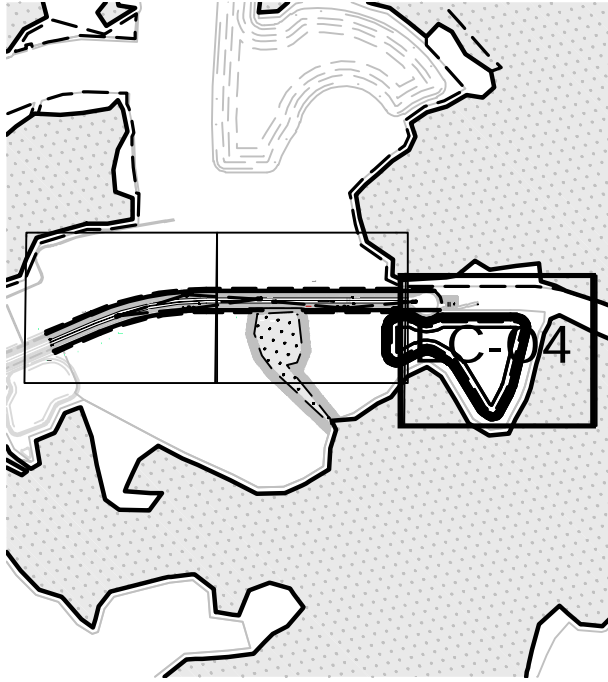
SEE SHEET LC-03
SEE SHEET LC-04

REFER TO HARDSCAPE PLANS

TOP OF BANK

10' WIDE LOW MAINTENANCE ZONE
TO BE PLANTED WITH UNFERTILIZED
NATIVE PLANTINGS INCLUDING BUT
TO LIMITED TO SPARTIA BAKERI AND
OTHER NATIVE GRASSES

10' WIDE LOW MAINTENANCE ZONE
TO BE PLANTED WITH UNFERTILIZED
NATIVE PLANTINGS INCLUDING BUT
TO LIMITED TO SPARTIA BAKERI AND
OTHER NATIVE GRASSES



KEY MAP

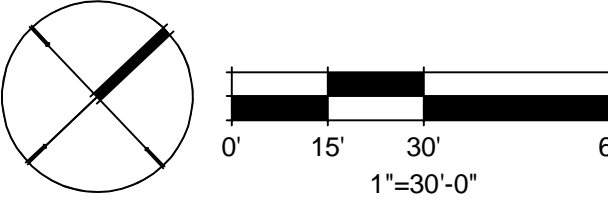
N.T.S.

PLANT LEGEND

SYMBOL	CODE	COMMON NAME
LARGE TREES		
	ARF-3	FLORIDA FLAME RED MAPLE
	LT-3	TULIP TREE
	MG-3	SOUTHERN MAGNOLIA
	QS-3	SHUMARD RED OAK
	QV-3	SOUTHERN LIVE OAK
PALM TREES		
	SP-16	CABBAGE PALMETTO
	SP-18	CABBAGE PALMETTO

NOTE:

ADDITIONAL LANDSCAPING ALONG WILDLIGHT AVENUE TO BE PROVIDED WHEN ADJACENT PROPERTIES ARE DEVELOPED.



KNOW WHAT'S BELOW
ALWAYS CALL 811
BEFORE YOU DIG

It's fast. It's free. It's the law.

www.callsunshine.com

LANDSCAPE PLAN

WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

Trusted
Advisors,
Creating
Community.

ETM
ENGLAND-THIMS & MILLER

PLANS PREPARED UNDER
THE DIRECTION OF:

JONATHAN F. KORMAN, PLA
L.A. NUMBER: LA6867357

ETM NO. 19-239-01-055

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com

REVISIONS:

DRAWN BY:	L.L.
DESIGNED BY:	L.L.
CHECKED BY:	J.F.K.
DATE:	MAY 2024

DRAWING NUMBER

LC-04

LANDSCAPE SPECIFICATIONS:

PART 1 GENERAL NOTES

- 1.1 Scope. This section includes all planting of shrubs, trees, ground covers, and other supplementary work shown on the drawings and specified herein, complete.
- 1.2 Applicable Documents. The following publications, specifications, and standards of the issues listed in this paragraph (including the amendments and addenda designated), but referred to hereinafter by basic designation only, form a part of this specification to the extent required by the references thereto.
- 1.3 Publication of Reference. Publications as herein listed shall be held in basic reference:
- 1.3.1 Grades and Standards for Nursery Plants, Parts I and II, State Department of Agriculture and/or State Plant Board of Florida, Seagle Building, Gainesville, Florida.
- 1.3.2 State of Florida Fertilizer Law, Office of the Secretary of State, Tallahassee, Florida.
- 1.3.3 American Standard for Nursery Stock (ANSI Z60.1–), American Association of Nurserymen.
- 1.3.4 Tree Care Operations (ANSI Z133.1–)
- 1.3.5 Guideline Specifications to Sodding, America Sod Producers Association (ASPA).
- 1.4 Substitutions of Plant Material. If a plant is found to be unavailable, submit proof of non–availability and a proposal for use of equivalent material. When authorized, adjustment of contract amount will be made. No substitutions will otherwise be authorized. To prove non–availability, The Contractor must provide at least five (5) letters from growers or dealers from the States of Florida and Georgia explaining the non–availability of the plant material. Substitutions made without prior approval may be rejected after planting and any replacement of materials will be at the contractors expense.
- 1.5 On–Site Conditions and Adjustments. The locations of plants, as shown on the plans, are approximate. Planting shall be adjusted to fit actual as–built conditions on the site, including but not limited to separation from hardscapes and utilities as governed by municipal codes. Any changes in locations caused thereby shall be made without additional cost to the Owner, Owner’s Representative, or Landscape Architect. The Contractor shall immediately notify the Owner’s Representative when conditions detrimental to plant growth are encountered, such as rubble fill, lime rock, or obstructions; and when field conditions are different than portrayed on the plans prior to planting. The Owner or Owner’s Representative may adjust the layout or location of specified plant materials to avoid these areas without additional costs.
- 1.6 Coordination of Plantings. Coordinate all landscape work with the Owner’s Representative and other contractors. Plant trees and shrubs after final grades are established and prior to planting of lawns, unless otherwise directed by the Owners Representative.
- 1.7 Fine Grading. Provide fine grading necessary to establish finish grade in all landscape areas. Fine grading shall include only minor grading to correct random or infrequent grade irregularities of 12” or less; unless otherwise noted on plans.
- 1.8 Liability of Contractor. The contractor shall be liable for any and all damages to property that result from his performance, including damage to preserved trees. He shall, without extra cost, mitigate or restore to original condition any areas and/or construction damaged, defaced, disturbed, or destroyed by him or his workmen.
- 1.9 Tree Tagging. A tree tagging trip may be requested by Owner’s Representative prior to approval of plant material. Landscape contractor shall be responsible for providing transportation and accommodations if necessary.
- 1.10 Inferior Materials. Contractor shall be responsible for rejecting inferior materials. Materials in a damaged or unhealthy state may be rejected by the Owners Representative if necessary.
- 1.11 Onsite Debris. Contractor shall be responsible for removing and disposing of offsite all stones over 1” in diameter, sticks, roots, and other extraneous matter in planted areas to a depth of 2’. If debris is excessive and results from construction waste please contact owners representative for appropriate actions.

PART 2 SUBMITTALS

- 2.1 Soil Testing for Plant Material. The Contractor shall be responsible for testing soils in planted areas to confirm that soil is suitable for healthy plant growth.
- 2.2 Seed Certification. All seed must comply with regulatory agencies for fertilizer and herbicide composition.
- 2.3 Inspection Certificates, Manufacturer’s Data. Upon request of Owners representative copies of inspection certificates or manufacturer’s data shall be provided for any material used onsite; in addition to existing materials found onsite.

PART 3 MATERIALS

- 3.1 General Plant Materials Requirements. Provide state inspected, nursery grown plants, unless otherwise specified. Conform to the plant schedule, "Florida Department of Agriculture Grades and Standards for Nursery Plants", local landscape ordinance, and, where applicable, to ANSI Z60.1 All plant materials shall be nursery grown, Florida No.1 stock. Any material not consistent with Florida Number 1 standards may be rejected after planting and replacement of materials will be at the contractors expense. All materials shall be healthy, vigorous, free of diseases and insects, pruned for best shape without appearance of "de–horning", and without symptoms of nutritional deficiency. Furnish plants grown under climatic conditions similar to those in the locality of the project. All plants must be true of variety, cultivars, and/or species. Plants must measure according to sizing requirements detailed on the drawings. Plants must be naturally bushy, dense, in good foliage, well branched, and of good appearance. The nursery/nurseries from which they are derived shall be under regulatory inspection by the Florida State Department of Agriculture and/or the Florida State Plant Board or an equivalent agency, if derived from outside the State of Florida. Plants entering from outside the State of Florida must bear the entry certificate of the State Department of Agriculture of the State of Florida. All plant materials will be subject to approval of the Owner or Owner’s Representative for quality, size and color.
- 3.2 Soil Additives. Contractor shall be responsible for adding peat, humus, fertilizer, manure, pH adjusters or any other commercially accepted soil additive to insure normal, healthy plant growth.
- 3.3 Balled and Burlapped Trees. Ensure that field grown material follows local industry standards for root pruning, digging, balling and burlapping, etc. All balled and burlapped materials must be hardened off before shipment. All materials are subject to approval by the Owners Representative prior to shipping to project site.
- 3.4 Spaded Trees. Trees shall have been spaded from a commercial nursery field that has been inspected by The Department of Agriculture and Consumer Services within the last 9 months. The Contractor shall provide a copy of the most recent Nursery, Stock dealer and Special Inspection Report for verification upon Owners Representative request. Ball size shall be at least one size greater than recommended by ANSI Z60.1, American Standard for Nursery Stock, unless otherwise specified. Spaded material is subject to approval and tagging by the Owner’s Representative prior to shipping to project site.

- 3.5 Container Plants. Provide container grown plants with sufficient roots to hold the container soil together after removal from the container. Root bound plants and plants with inadequate root systems are not acceptable.
- 3.6 Surface Mulch. Plans shall specify mulch type. Mulch shall be in a non–decomposed state; not more than one (1) season old.
- 3.7 Herbicides, Insecticides. Chemical sprays, dusts, or gaseous compounds used on or around plant materials, including but not limited to trees, shall be approved for such uses by the environmental protection agency and the Florida department of agriculture and consumer services. Such materials as may be used shall not constitute a hazard to human health or interfere with site working conditions and habitation.
- 3.8 General Seed Requirements. Where seeding may be required on the plans, the seed required shall comply with all minimum provisions of the Florida seed certification and testing law. Noxious weed seeds shall be non–existent and foreign materials shall not exceed two percent. All disturbed areas not shown as sodded shall be seeded.
- 3.9 General Sod Requirements. See plan for specified sod. All sod shall be healthy, strongly rooted and not less than two (2) years old, free of weeds and undesirable native grasses in 16” x 24” pads, 1–1/2” thick. Sod shall conform to "nursery grown" grade as established by American Sod Producers Association (ASPA). Sod shall be considered free of weeds if less than 5 weeds are found per 100 square feet of area. Brown, dry, irregularly smooth, and/or un–fresh sod will be rejected.

PART 4 PLANTING PROCEDURES

- 4.1 General. Prior to commencement of any work, the landscape contractor shall inspect the site, locate planting areas, placement of guying devices, locate electrical cables, conduits, and other underground and above utilities so that proper precautions and procedures may be followed during and throughout construction. The contractor shall become familiar with other job trade activity which has an impact upon his work or upon which his work has an impact and shall arrange to carefully coordinate his work with other trades through the owner’s representative on–site. All planting practices listed herein shall insure healthy plant growth.
- 4.2 Layout. The location of plants and planting beds, as shown on these plans, are approximate. The locations and bed lines shall be staked on the project site by the contractor and approved by the owner’s representative before any plant pits or beds are dug. The contractor is responsible for verifying that proper setbacks, as defined by local codes and rules, are provided between trees and their proximity to utilities and hardscapes. Unless otherwise noted, no tree shall be planted closer than four feet to a hardscape surface. The owner’s representative may adjust plant material locations to meet field conditions. Contractor shall make minor adjustments without additional cost to the owner.
- 4.3 Finish Grades. The landscape contractor is responsible for all fine grading and preparation for planting. Finish grades (top of soil) for all sod areas after settlement shall be one–half inch below the top of abutting curbs, walks, walls and abutments. The finish grade of all plant beds prior to mulching shall be three inches below finish grade of sod, abutting curbs, walks and walls. Three inches of mulch shall be added after planting.
- 4.4 Planting Seasons/Times. The planting of plant materials and lawns may proceed at any time, period, or season agreed upon by the contractor and the owner or owner’s representative.
- 4.5 Plant Pits. The contractor shall excavate plant pits, unless otherwise approved, according to the drawings.
- 4.6 Setting Plants. Each plant shall be established in a manner consistent with plant details. All plants shall be set plumb and straight. Plants shall be established to a depth that is not greater than that at which they grew when in the nursery container or field. All back fill shall be tamped and worked firmly under and around the root ball to fill all voids.
- 4.7 Soil Preparation for Trees, Shrubs and Groundcover. All areas to be planted shall be prepared in a manner to insure normal, vigorous and healthy growth of plant material.
- 4.8 Staking. All trees are to be staked unless otherwise instructed by owner or owner’s representative. Refer general staking details on the drawings. Materials used shall insure healthy plant growth.
- 4.9 Mulching. All plant beds and plant saucers shall be uniformly covered with a four–inch (4”) layer of mulch. Hedges shall be mulched the full width of the hedge bed. Contain mulch within landscape borders.
- 4.10 Sod. All areas to be either seeded, sprigged, or sodded shall be prepared in a manner to insure normal, vigorous and healthy growth.

- 4.10.1 Fine grade lawn areas to smooth, even surface with loose, uniformly fine texture. Roll, rake and drag lawn areas, remove ridges and fill depressions with topsoil as required to meet finish grades. In areas to be sodded, allow for sod thickness.
- 4.10.2 Sod Installation. Lay sod in straight, parallel rows to form a solid mass with tightly fitted joints, without overlap. Stagger strips to offset joints. Work topsoil into minor cracks. On 1:3 slopes or greater, lay sod with long dimension of pads parallel to contours and stake sod as necessary to stabilize. Drive sod stakes flush with top of sod.
- 4.10.3 Sprigging and Seeding. Sprigging/seeding shall be done in a manner to insure a quick grow in period achieving a uniform green lawn prior to final acceptance.

PART 5 MAINTENANCE

- 5.1 Plant Material. Maintain all plant materials until final acceptance. Maintenance shall include all required watering, cultivation, weeding, mowing, pruning, wound dressing, immediate replacement of dead and unacceptable material, straightening plants which lean or sag, adjustments of plants which are planted too low, and any other procedure consistent with good horticultural practice necessary to insure normal, vigorous and healthy growth of all planting under this contract.

- 5.2 Lawn. Maintain lawns until final acceptance. Reset settled or eroded sod areas to proper grade. Fill open joints with topsoil. Keep sod free of insects and disease.

PART 6 FINAL INSPECTION AND ACCEPTANCE

- 6.1 Final Cleanup. Upon final completion of work and before inspection and acceptance, all aspects of the project site shall be thoroughly and completely cleaned of debris, stains, materials, defacements, and temporary facilities. Likewise, any repairs, which are the obligation of this contractor, shall be completed.

- 6.2 Initial Inspection and Acceptance. Inspection shall be made by the owner or owner’s representative within (10) ten days of written notification from the contractor that installation is complete. If all work and materials meet specifications project will be accepted as is. Materials and work not in compliance with specifications shall be rejected by owners representative and replaced by the contractor within (15) fifteen days of notification by owner’s representative. Notification will graphically depict all rejected material on plans. Upon replacement of all rejected work and materials by the contractor the owner’s representative shall conduct a final inspection within ten (10) days of written notification from the contractor that all rejected work has been replaced according to specifications. Approval will be granted upon the acceptance of all replaced material noted on plans. After final acceptance, the landscape contractor will not be responsible for damage to work resulting from:neglect by owner, damage by others; abnormal weather conditions such as floods, excessive wind, severe freezing or abnormal rains; or other activities clearly beyond the landscape contractor’s control.

PART 7 GUARANTEE

- 7.1 Guarantee. All plant materials and trees installed by the contractor shall be guaranteed for 365 days from the date of final inspection and acceptance. The contractor shall replace at no additional cost to the owner, all plant materials which die and/or which are not healthy and in a good growing condition during the guarantee period. Replacement of such material shall occur within ten (10) days from owner’s written notification to the contractor. The 365 day guarantee period for replaced plant materials shall commence on the date of acceptance of the replaced item or items of plant material. The contractor shall not be required to replace, repair, or restore any portion of the work that is damaged, defaced, disturbed, and/or destroyed by others after final acceptance.

NOTE: IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY WITH THE LANDSCAPE ARCHITECT THAT THEY ARE USING THE MOST CURRENT PLAN SET FOR BIDDING AND INSTALLATION. FAILURE TO VERIFY CURRENT PLAN SET COULD RESULT IN CORRECTIVE WORK, INCLUDING DESIGN REVISIONS AND PERMITTING FEES TO BE PERFORMED AT THE CONTRACTORS EXPENSE.

PLANS PREPARED UNDER THE DIRECTION OF:

JONATHAN F. KORMAN, P.L.A.
L.A. NUMBER: LA8667957

REVISIONS:

ETM NO. 19-239-01-005

DRAWN BY: L.L.

DESIGNED BY: L.L.

CHECKED BY: J.F.K.

DATE: MAY 2024

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8900
www.etmnc.com
REG- 00002584 LC-0000316

Trusted
Advisors,
Creating
Community.

ETM

ENGLAND-THIMS & MILLER

LANDSCAPE NOTES & SPECIFICATIONS

WILDLIGHT AVENUE PHASE 4

FOR: RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER

LC-05

T:\2019\19-239\19-239-01 - Royentier Work\19-239-01-005 Wildlight Avenue Extension\Landscapes\Plot\19-239-01-005_LC Plot.dwg

PLOTTED: June 28, 2024 — 9:10 AM, By: Anthony Dornes

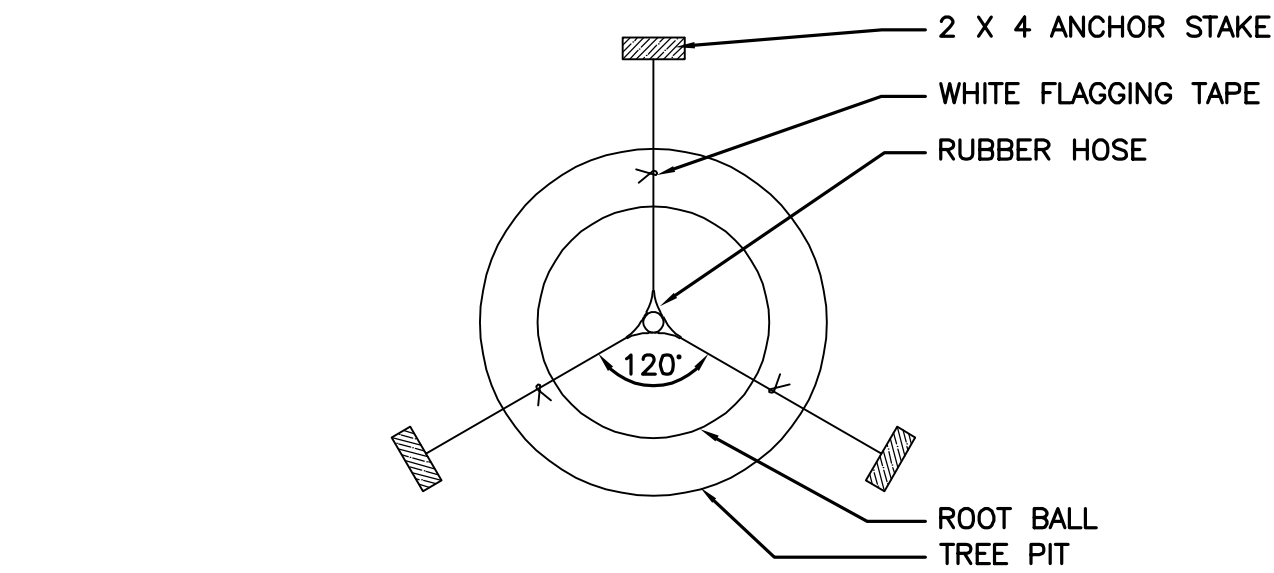
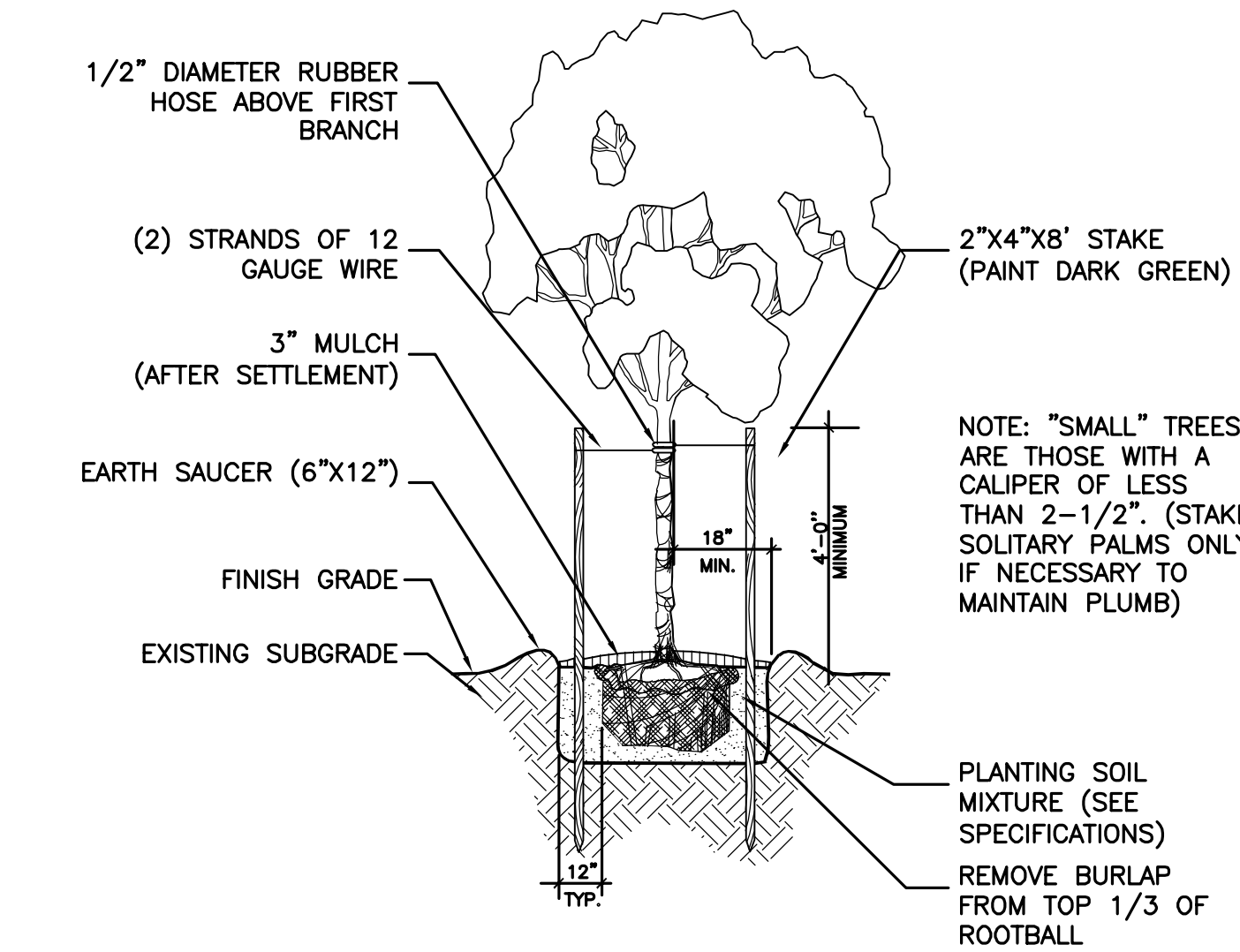
LANDSCAPE SPECIFICATIONS:

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	REMARKS
LARGE TREES							
ARF-3	6	ACER RUBRUM 'FLORIDA FLAME'	FLORIDA FLAME RED MAPLE	SIZE AS NEEDED	3" CAL.	12-14' HT X 7' SPD	
LT-3	6	LIRIODENDRON TULIPIFERA	TULIP TREE	SIZE AS NEEDED	3" CAL.	12-14' HT X 6' SPD	
MG-3	6	MAGNOLIA GRANDIFLORA 'D.D. BLANCHARD' TM	SOUTHERN MAGNOLIA	SIZE AS NEEDED	3" CAL.	14' HT. X 6' SPD.	
QS-3	5	QUERCUS SHUMARDII	SHUMARD RED OAK	SIZE AS NEEDED	3" CAL.	12 -14' HT X 7' SPD	
QV-3	6	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	SIZE AS NEEDED	3" CAL.	12-14' HT X 7' SPD	
PALM TREES							
SP-16	3	SABAL PALMETTO	CABBAGE PALMETTO	FG		16' CT.	REGENERATED, SLICK TRUNK
SP-18	4	SABAL PALMETTO	CABBAGE PALMETTO	FG		18' CT.	REGENERATED, SLICK TRUNK
MULCH							
		PINE STRAW, 3-4" THICK					

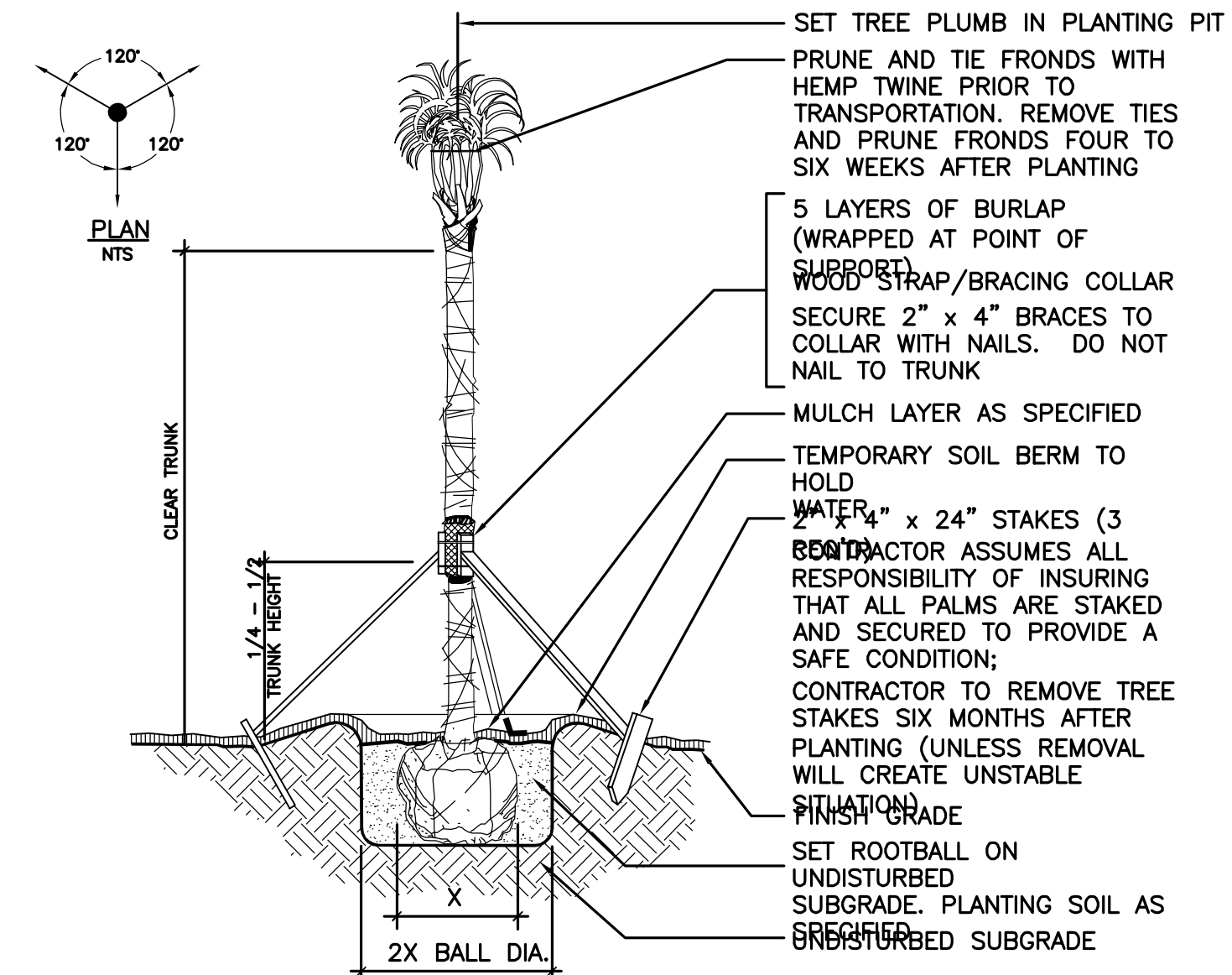
TREES PLANTED

QUANTITY	COMMON NAME	TYPE	NATIVE	PERCENT OF TREES
6	Southern Live Oak	Canopy	Y	16.7%
6	Southern Magnolia	Canopy	Y	16.7%
5	Shumard Oak	Canopy	Y	13.9%
6	Tulip Tree	Canopy	Y	16.7%
7	Cabbage Palm	Understory	Y	19.4%
6	Red Maple	Canopy	Y	16.7%
36	100% Canopy	100% Native	100.00%	



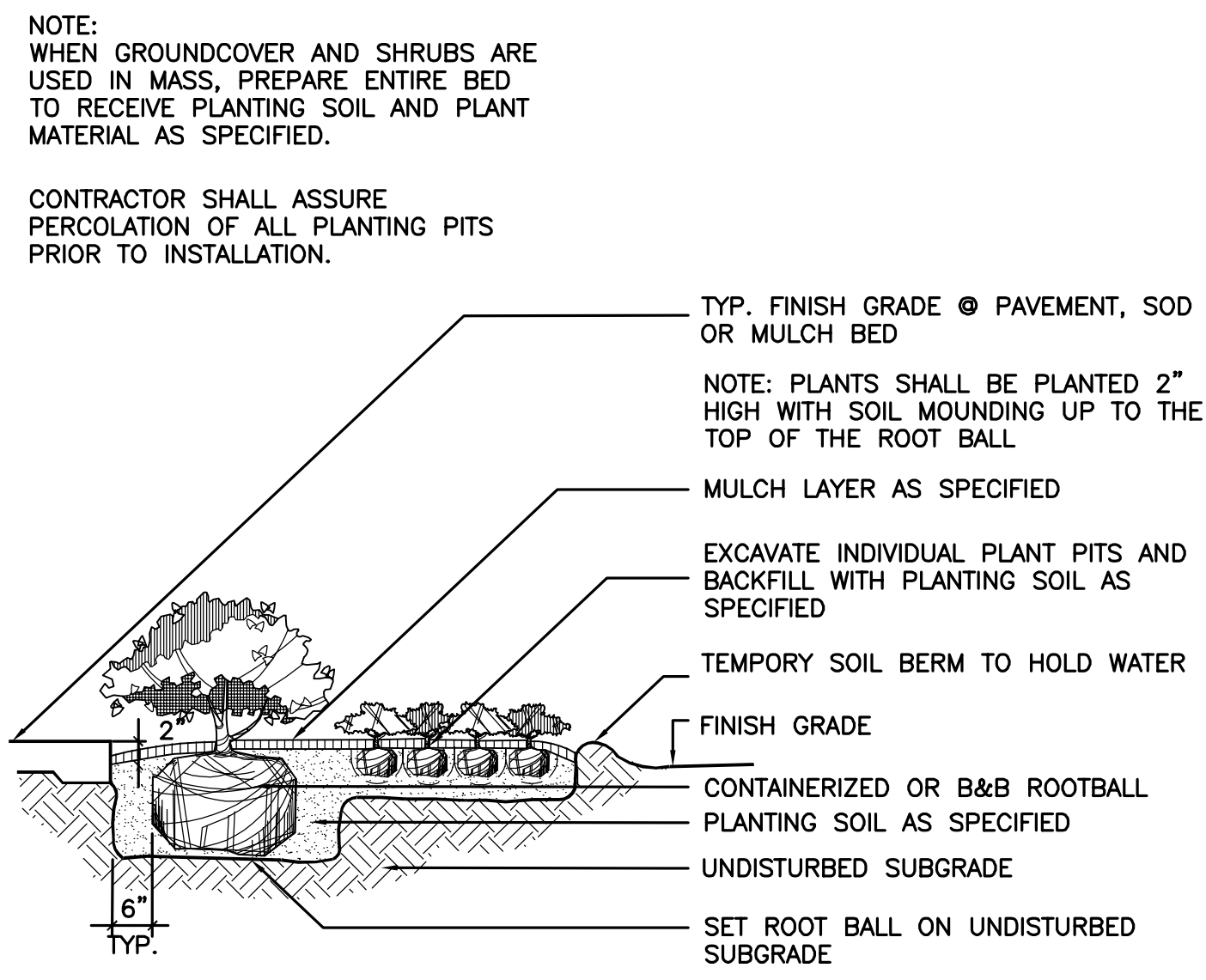
NASSAU COUNTY TREE PLANTING DETAIL

SCALE: NTS



TYPICAL PALM PLANTING DETAIL

SCALE: NTS



SHRUB AND GROUNDCOVER PLANTING DETAIL

SCALE: NTS

PLANS PREPARED UNDER THE DIRECTION OF:
JONATHAN F. KORMAN, PLA
L.A. NUMBER: LA6867357

REVISIONS:
ETM NO. 19-239-01-055
DRAWN BY: L.L.
DESIGNED BY: L.L.
CHECKED BY: J.F.K.
DATE: MAY 2024

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com
REG-00002584 LC-0000316

Trusted Advisors, Creating Community.

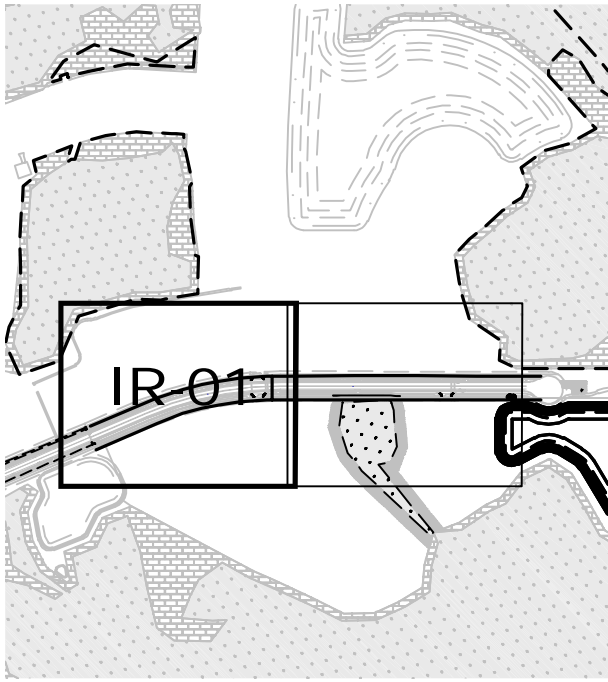
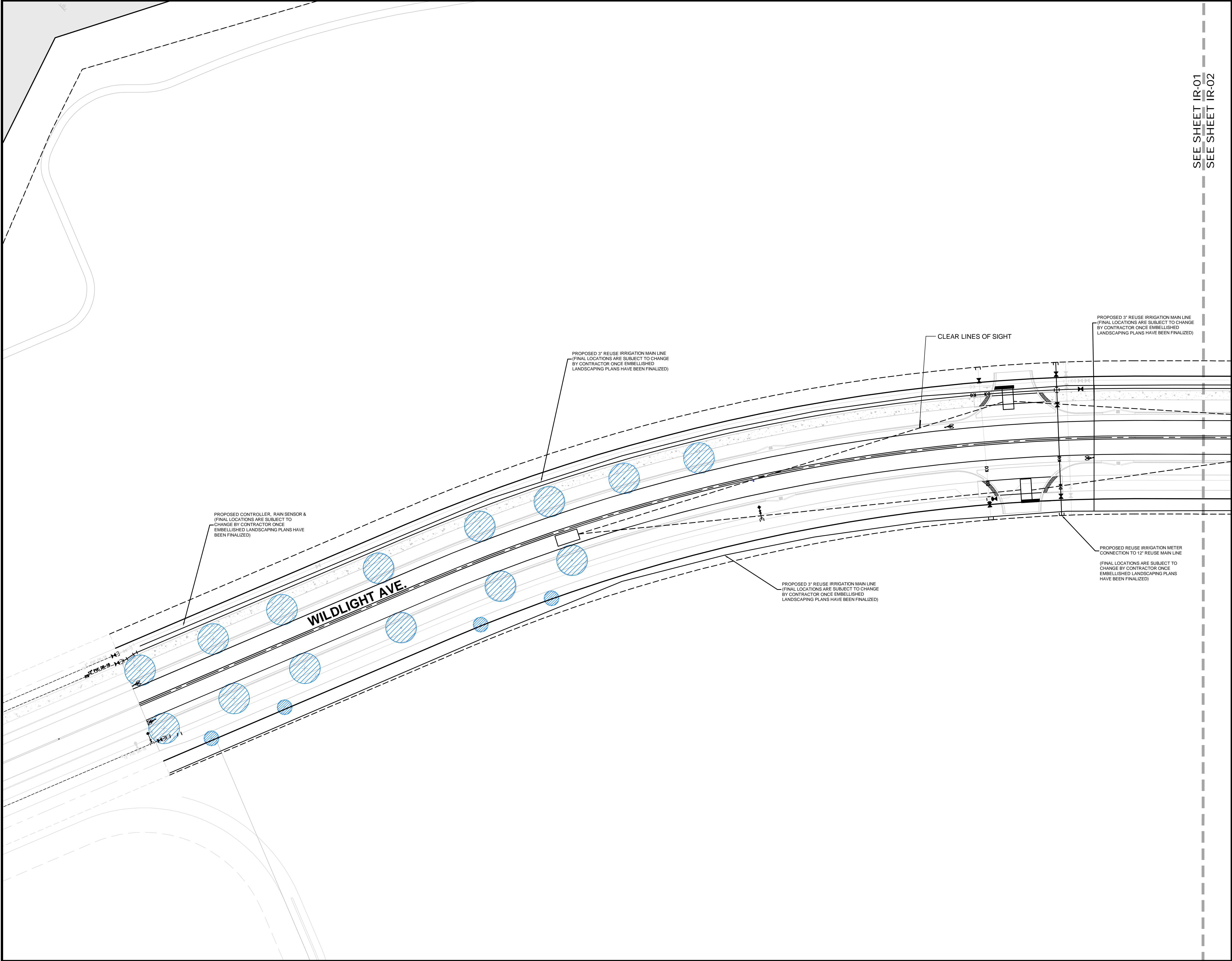
ETM
ENGLAND-THIMS & MILLER

LANDSCAPE SCHEDULE & DETAILS
WILDLIGHT AVENUE PHASE 4
FOR: RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
LC-06

T:\2019\19-239\19-239-01 - Royentier Work\19-239-01-055 Wildlight Avenue Extension\Landscapes\Plot\19-239-01-055 LC PLOT.dwg

PLOTTED: June 28, 2024 — 9:10 AM, BY: Anthony Dornes



KEY MAP

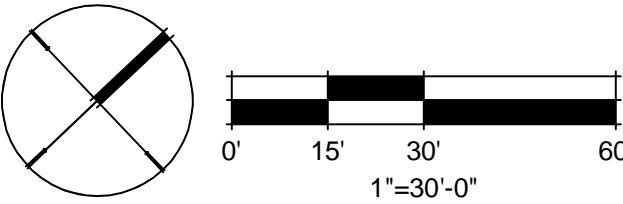
N.T.S.

IRRIGATION USE ZONES:

LOW WATER USE ZONE

NOTE:

ADDITIONAL LANDSCAPING ALONG WILDLIGHT AVENUE TO BE PROVIDED WHEN ADJACENT PROPERTIES ARE DEVELOPED.



811 KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG

www.callsunshine.com

ETM

ENGLAND-THIMS & MILLER

Trusted Advisors, Creating Community

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com

IR-01

WILDLIGHT AVENUE PHASE 4 FOR RAYDIENT PLACES + PROPERTIES

IRRIGATION PLAN

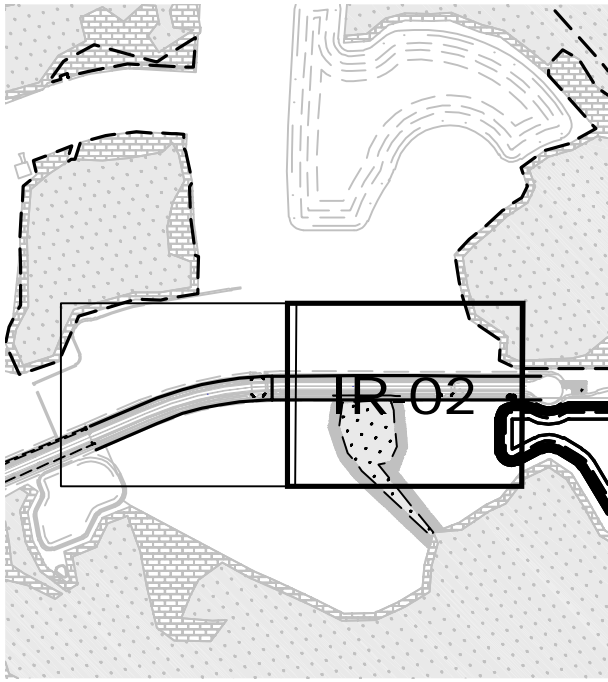
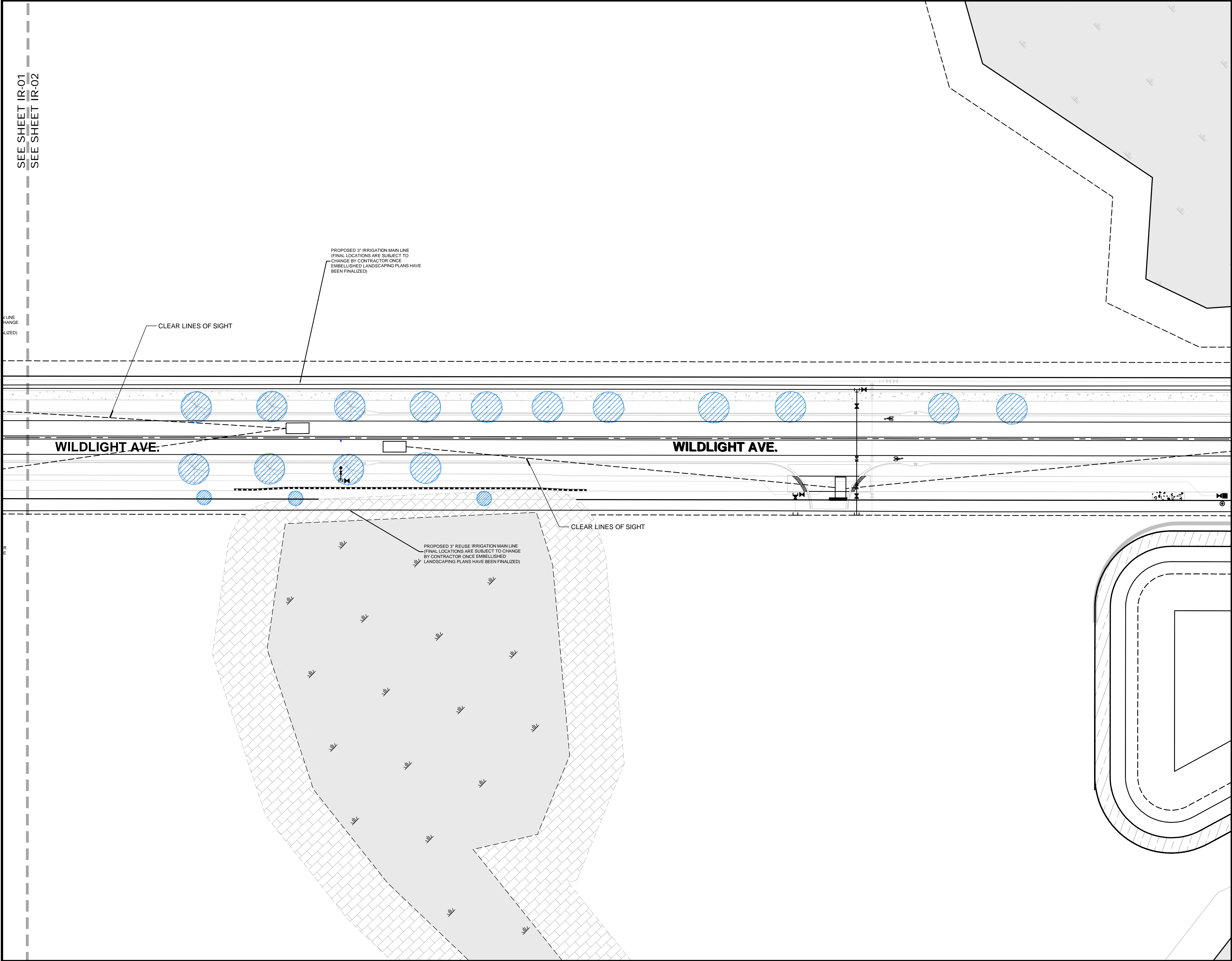
PLANS PREPARED UNDER THE DIRECTION OF:

JONATHAN F. KORMAN, P.L.A.
L.A. NUMBER: LA6867357

REVISIONS:

ETM NO. 19-239-01-055	LL
DRAWN BY:	LL
DESIGNED BY:	LL
CHECKED BY:	J.F.K.
DATE:	MAY 2024

19-239-01-055 IR-01



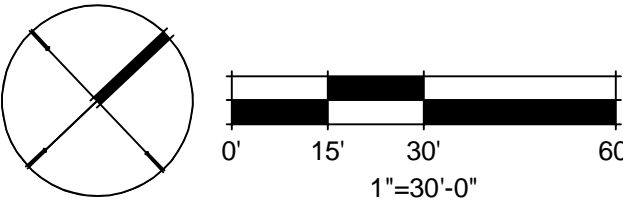
KEY MAP

N.T.S.

IRRIGATION USE ZONES:

LOW WATER USE ZONE

NOTE:
ADDITIONAL LANDSCAPING ALONG WILDLIGHT AVENUE TO BE PROVIDED WHEN ADJACENT PROPERTIES ARE DEVELOPED.



811 KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG

www.callsunshine.com

IRRIGATION PLAN

WILDLIGHT AVENUE PHASE 4

FOR RAYDIENT PLACES + PROPERTIES

ETM

ENGLAND-THIMS & MILLER

Trusted Advisors, Creating Community

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8900
www.etmnc.com
REG-00002584 LC-0000316

DRAWING NUMBER

IR-02

PLANS PREPARED UNDER THE DIRECTION OF:

JONATHAN F. KORMAN, P.L.A.
L.A. NUMBER: LA6867357

REVISIONS:

ETM NO. 19-239-01-055	DRAWN BY: L.L.	DESIGNED BY: L.L.	CHECKED BY: J.F.K.	DATE: MAY 2024
-----------------------	----------------	-------------------	--------------------	----------------

PLOTTED: June 25, 2024 — 9:11 AM, BY: Anthony Dornes

LANDSCAPE CODE SUMMARY

REFERENCE	DESCRIPTION	NOTES/ COMPLIANCE?
37.05.H	Xeriscape. Xeriscaping (waterwise) is landscaping that conserves water and protects the environment and is adaptable to local conditions and which are drought tolerant. Xeriscape techniques maximize the conservation of water use with site appropriate plants, an efficient watering system, proper planning and design, soil analysis, practical use of turf, the use of mulches (which may include the use of solid waste compost) and proper maintenance. The following water efficient principles should be applied to the landscape plan:	YES
37.05.H.1	All plantings shall be grouped in zones according to water requirements and shall be irrigated in zones separating high water use areas from drought tolerant zones. The zones are as follows: a.High water use zone: A zone containing plants which are associated with moist soils and require supplemental water in addition to natural rainfall to survive. This zone includes most turf grasses. b.Moderate water use zone: A zone containing plants which survive on natural rainfall with supplemental water during seasonal dry periods. Low water use zone: A zone containing plants which survive on natural rainfall without supplemental water	YES
37.05.H.2	Fifty (50) percent of the plants used in all vehicular use area landscape designs should be drought tolerant and located in groupings according to zones designated by the water requirements.	YES
37.05.H.3	Turf grass areas should be consolidated and limited to those areas on the site that receive pedestrian traffic, provide for recreational uses, provide soil erosion control such as berms, slopes and swales, where turf grass is used as a design unifier or other similar practical use.	YES
37.05.H.4	All planting areas shall be mulched with approximately three (3) inches of organic mulch, such as pine bark or shredded hardwood chips.	YES

NASSAU COUNTY NOTES:

- 1) ALL PLANTS WILL BE FULLY IRRIGATED AS PER 37.05(G)(1).
- 2) ALL PLANTINGS WILL FOLLOW XERISCAPE GUIDELINES AS PER 37.05(H).
- 3) HIGH USE WATER ZONES TYPICALLY BUT NOT LIMITED TO FEATURE ROTOR IRRIGATION HEADS
- 4) MODERATE USE WATER ZONES TYPICALLY BUT NOT LIMITED TO FEATURE SPRAY HEAD AND LOW WATER USE ROTORS
- 5) LOW USE WATER ZONES TYPICALLY BUT NOT LIMITED TO FEATURE DRIP IRRIGATION TUBING AND BUBBLERS
- 6) FINAL LOCATION OF MAINLINE, LATERAL LINES, CONTROLLER AND RAIN SENSOR WILL BE DETERMINED ONCE FINAL EMBELLISHED LANDSCAPE PLANS ARE COMPLETED. IRRIGATION SYSTEM WILL PROVIDE 100% HEAD TO HEAD COVERAGE. COMPLETE DETAILED IRRIGATION DESIGN WILL BE PRODUCED ON COMPLETION OF FINAL EMBELLISHED LANDSCAPE DESIGN.

IRRIGATION CODE SUMMARY AND

NOTES

WILDLIGHT AVENUE PHASE 4

FOR: RAYDIENT PLACES + PROPERTIES

DRAWING NUMBER
IR-03

ETM

ENGLAND-THIMS & MILLER

Trusted
Advisors,
Creating
Community

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com
REG-00002584 LC-0000316

REVISIONS:
07/28/20 REVISED PER NASSAU COUNTY

ETM NO. 19-239-01-055
DRAWN BY: L.L.
DESIGNED BY: L.L.
CHECKED BY: J.F.K.
DATE: MAY 2024

PLANS PREPARED UNDER
THE DIRECTION OF:

JONATHAN F. KORMAN, P.L.A.
L.A. NUMBER: LA6867357

GENERAL CONSTRUCTION NOTES:

1.

All dimensions are taken from centerline of wall, edge of pavement, face of curb, and/or centerlines of roads at 90 degree angles, unless otherwise noted on plan. The dimensions are shown for approximate line and all radii and curves are to have continuous and smooth transitions without abrupt changes or bends.
2.

All forms and alignment of paving, pilasters and walls shall be inspected and approved by the owner's representative prior to pouring (give a minimum of 48 hours notice).
3.

For site pavement grading and drainage, see civil engineers plans.
4.

Contractor shall verify location of all surface and sub-surface utilities prior to construction and shall be held liable for damages incurred.
5.

Contractor shall be responsible for verifying all irrigation sleeves in the field with the developer.
6.

These notes shall be used in conjunction with the plans and any discrepancies shall be brought to the attention of the owner's representative.
7.

Contractor must check all dimensions, framing conditions and site conditions before starting work. Owner's representative shall be notified immediately of any discrepancies or possible deficiencies
8.

Do not willfully install or construct items as shown on the drawings when it is obvious in the field that unknown obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the owner's representative. In the event this notification is not performed, the contractor shall assume full responsibility for any revisions necessary.
9.

Conditions not specifically shown shall be constructed similar to the details for the respective materials.
10.

The drawings and specifications represent the finished structure. All bracing, temporary supports, shoring, etc. is the sole responsibility of the contractor. Observation visits to the job site by the owner's representative do not include inspection of construction methods and for safety conditions at the work site. These visits shall not be construed as continuous and detailed inspections.
11.

Contractor shall refer to soils engineer's report for percentages of compaction required for all concrete flatwork and footings.
12.

Site furnishings shall be installed per manufacturers recommendations, or as recommended in the drawings. Details provided in the drawings for anchoring of furnishings are provided for intent only. It shall be the contractors responsibility to coordinate with the manufacturer and submit anchoring details for approval by owner's representative prior to installation.
13.

All references to 'Gray' concrete shall mean natural concrete with no color additive.
14.

All broom finished concrete shall be broomed in the same direction as indicated on the drawings or as directed by the owner. The broom finish appearance shall not deviate substantially from pour to pour or one section of concrete to another.

GENERAL NOTES:

GENERAL CONDITIONS

1.

If materials, quantities, strengths or sizes indicated by the drawings or specifications are not in agreement with these notes, the better quality and/or greater quantity, strength or size indicated, specified or noted shall be provided.
2.

It is the contractors sole responsibility to determine erection procedure and sequence to insure the safety of the structures and its component parts during erection. This includes, but is not limited to, the addition of temporary bracing, guys or tie-downs as may be necessary. Such material shall be removed and shall remain the poperty of the contractor after completion of the project.
3.

All dimensions and elevations shown on the structural drawings shall be verified by the contractor to conform to those shown on the drawings.
4.

The contractor shall be held responsible for having visited the site and having familiarized himself with all existing conditions. Any questions or discrepancies found with regard to the drawings shall be brought to the attention of the architect before submitting a proposal. Field measure existing conditions prior to fabrication of materials.

DESIGN CRITERIA

1.

All work shall be performed in strict accordance with the requirements of:

- A. General Building Code: Florida Building Code 2023
- B. Concrete: Building Code requirements for reinforced concrete (ACI 318–89) Specifications for structural concrete for buildings (ACI 301–84).

Design Loads

Wind Loads:

Basic Wind Speed = 130 MPH with 3 second gust
Risk Category II
Exposure = C
Internal pressure coefficient: 0.18 fully enclosed structure
Components and cladding (ASD) +25.23 PSF and –33.06 PSF for design wind pressure

CAST IN PLACE CONCRETE

1.

All concrete shall have the following minimum compressive strength at 28 days:

- Slab on grade, footings3000 psi

- Remaining concrete4000 psi
2.

All concrete shall have a slump of 4" plus or minus 1", and have 2 to 4% air entrapment, and a maximum water/cement ratio of 0.58.
3.

Concrete mix design shall be in accordance with the Latest Edition of ACI 301 Chapter 3, Method 1 or Method 2, submit backup data as required by Chapter 5 Section 5.3 of the Latest Edition of ACI 318.
4.

All reinforcing steel shall be new domestic deformed billet steel conforming to ASTM A-615 Grade 60.
5.

All concrete work shall be in accordance with 'The Building Code Requirements for Reinforced Concrete' ACI 318 Latest Edition, and 'Specifications for Structural Concrete for Buildings,' ACI 301.
6.

All reinforcing details shall conform to 'Manual of Standard Practice for Detailing Reinforced Concrete Structures' ACI 315 Latest Edition, unless detailed otherwise on the structural drawings.
7.

Contractor shall review architectural and civil drawings for size and location of embedded items, sleeves, slab depressions, slopes, etc. required by other trades. These items shall be furnished and installed prior to placement of concrete.
8.

Contractor shall verify locations of all openings, sleeves, anchor bolts, inserts, etc. as required by other trades before concrete is placed.
9.

Where bar lengths are given on the drawings, the length of any hook, if required, is not included.
10.

Contractor shall provide spacers, chairs, bolsters, etc. necessary to support reinforcing steel. Support items which bear on exposed concrete surfaces shall have ends which are plastic tipped or stainless steel.
11.

Contractor shall provide ¾ inch chamfer on all exposed corners of columns, beams, and walls unless otherwise indicated on the architectural drawings.
12.

Contractor shall furnish 1 ton of #5 reinforcing bars delivered to the job site in standard lengths and fabricated and placed as directed by the architect. The unused material shall be removed and credited to the projet at the contract unit price.
13.

The following minimum concrete cover shall be provided for reinforcement:

3" concrete cast against and permanently exposed to earth.

2" concrete exposed to earth or weather, #6 through #18 bars.

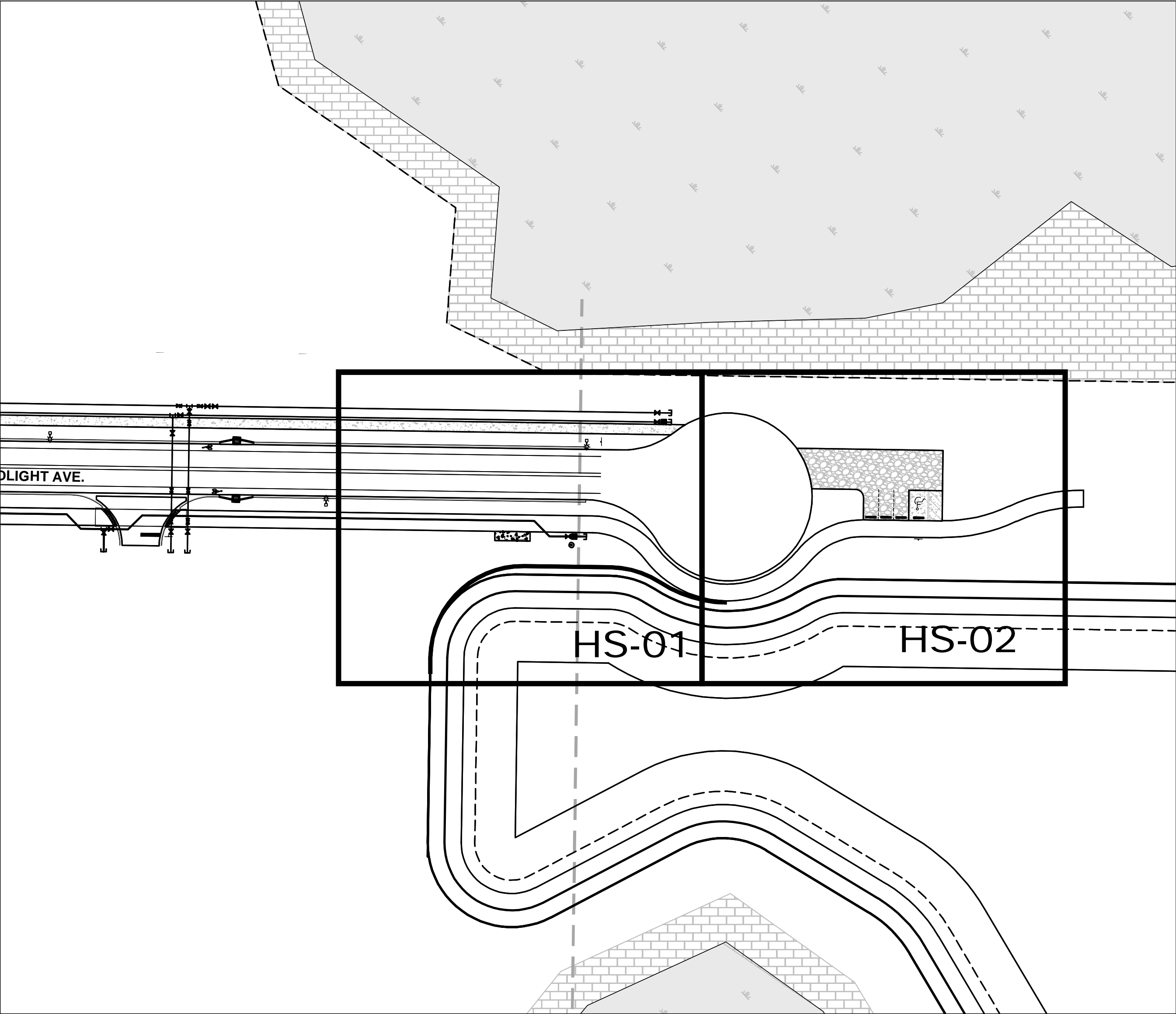
1 ½ " concrete exposed to earth or weather, #5 bar and smaller.
14.

Contractor shall keep a copy of 'Field Reference Manual' (ACI Publication SP-15, Latest Edition) at the project field office.
15.

Minimum lap splices on all reinforcing bar splices shall be 48 bar diameters typ. except where otherwise noted on the drawings. For beams and elevated slabs, lap bottom steel at the support and top steel over the midspan, unless otherwise noted.
16.

Testing laboratory shall submit one copy of all concrete test reports directly to the engineer.
17.

Along curved wall sections, the rebar spacing specified is a minimum for each face. Provide additional bars as needed to maintain the specified rebar spacing.



Finish Schedule						
Site Furnishings						
Symbol	Construct	Color	Finish	Manufacturer	General Notes	Detail Number
A	Bench	Black Powdercoat Tan Recycled Plastic Slats	N/A	Anova Furnishings 800-231-1327	1- Surface mount per manufacturer's specifications	1/HS-03
C	Bike Rack	Black Powdercoat	N/A	Anova Furnishings 800-231-1327	1- Surface mount per manufacturer's specifications	3/HS-03
D	Construct reinforced slab edge	Natural Gray	Broom finish	Supplied by Contractor		2/HS-03

PLANS PREPARED UNDER THE DIRECTION OF:

ETM NO. 19-239-01-055

DRAWN BY: L.L.

DESIGNED BY: L.L.

CHECKED BY: J.F.K.

DATE: MAY 2024

REVISIONS:

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com
REG- 00002684 LC-0000316

Trusted
Advisors,
Creating
Community.

ETM

ENGLAND-THIMS & MILLER

HARDSCAPE COVER

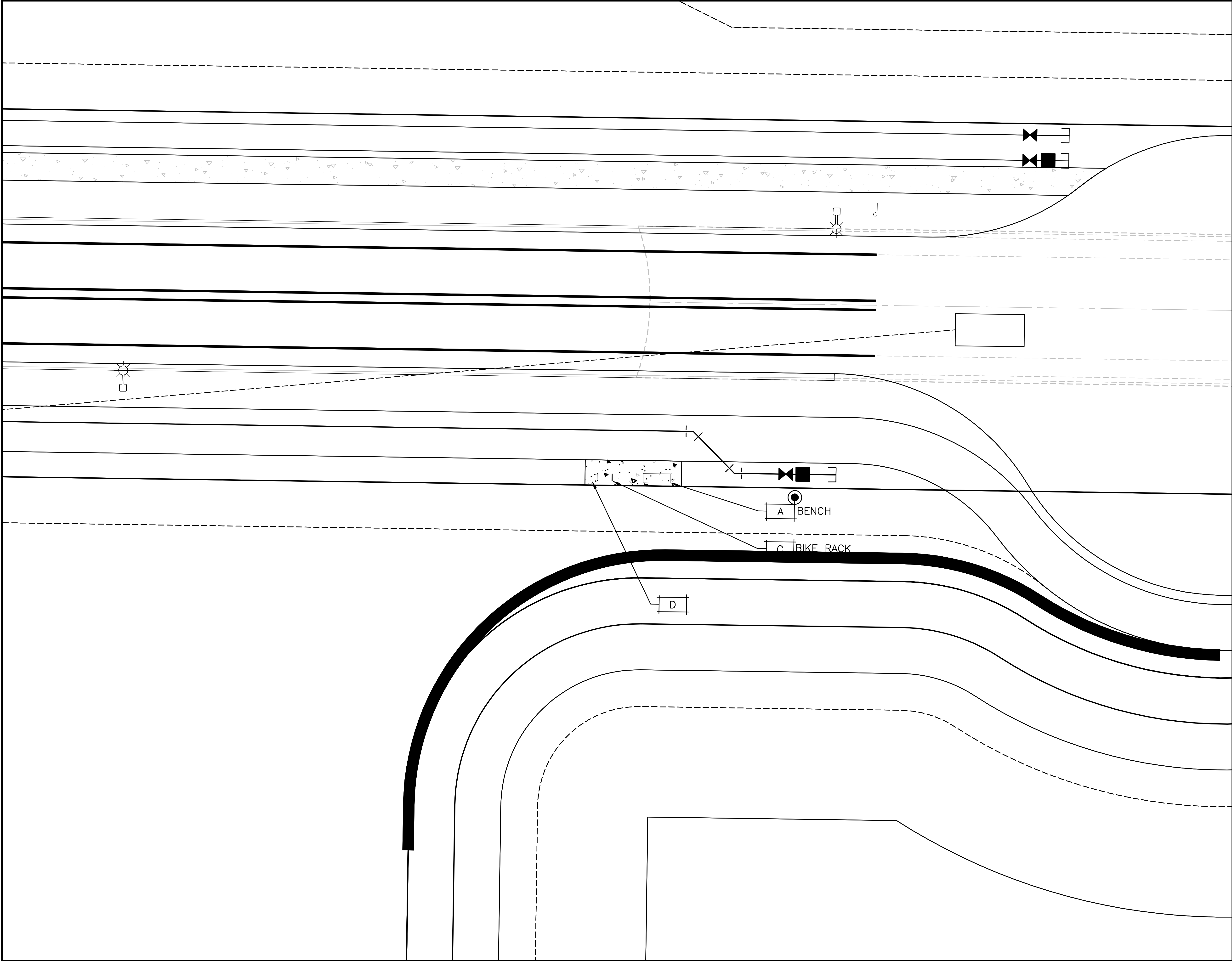
WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES


DRAWING NUMBER
HS-00

JONATHAN F. KORMAN, P.L.A.
L.A. NUMBER: LA8667357

PLOTTED: June 26, 2024 — 9:11 AM, BY: Anthony Dornes

T:\2019\19-239\19-239-01 - Royentier Work\19-239-01-055 Wildlight Avenue Extension\Landscape\Plot\19-239-01-055_HS Plot.dwg

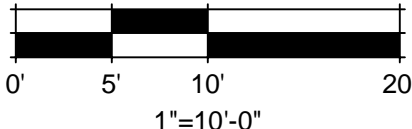
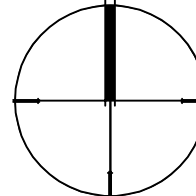


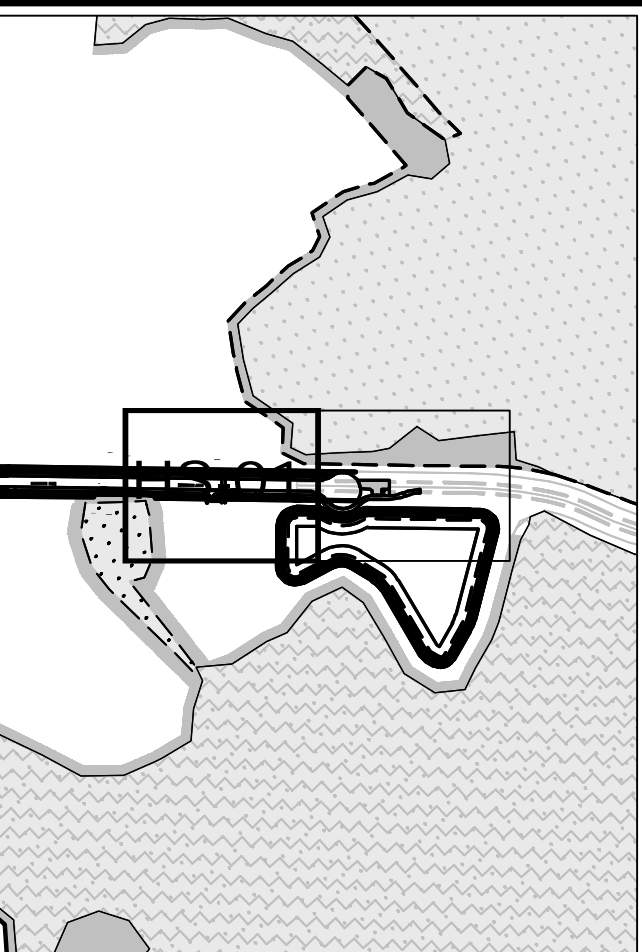


KNOW WHAT'S BELOW
ALWAYS CALL 811
BEFORE YOU DIG

It's fast. It's free. It's the law.

www.callsunshine.com





KEY MAP

N.T.S.

Finish Schedule	
Site Furnishings	
Symbol	Construct
A	Bench
C	Bike Rack
D	Construct reinforced slab edge

HARDSCAPE PLAN

WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES

ETM

ENGLAND-THIMS & MILLER

Trusted
Advisors,
Creating
Community

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com

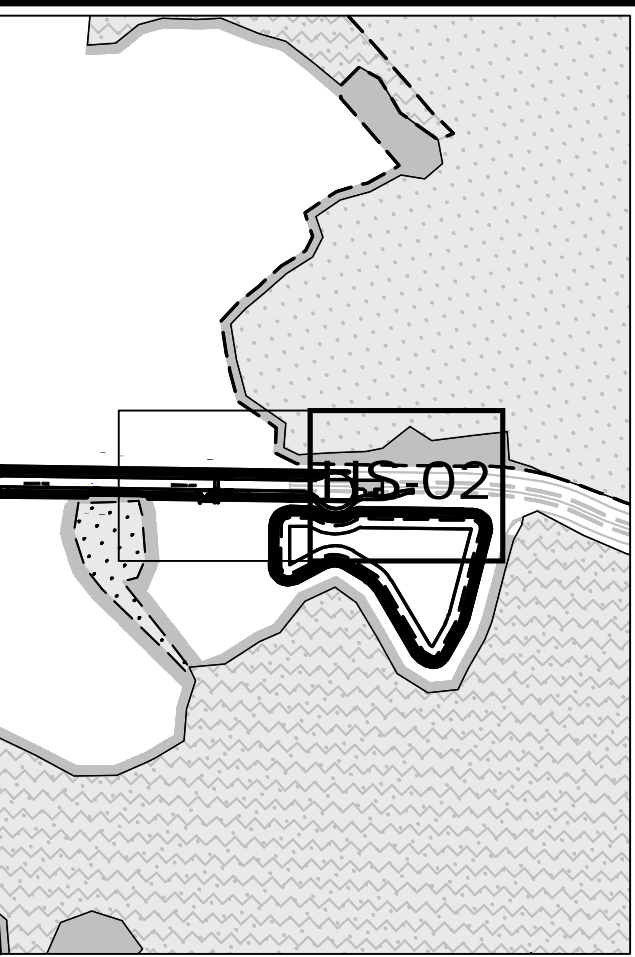
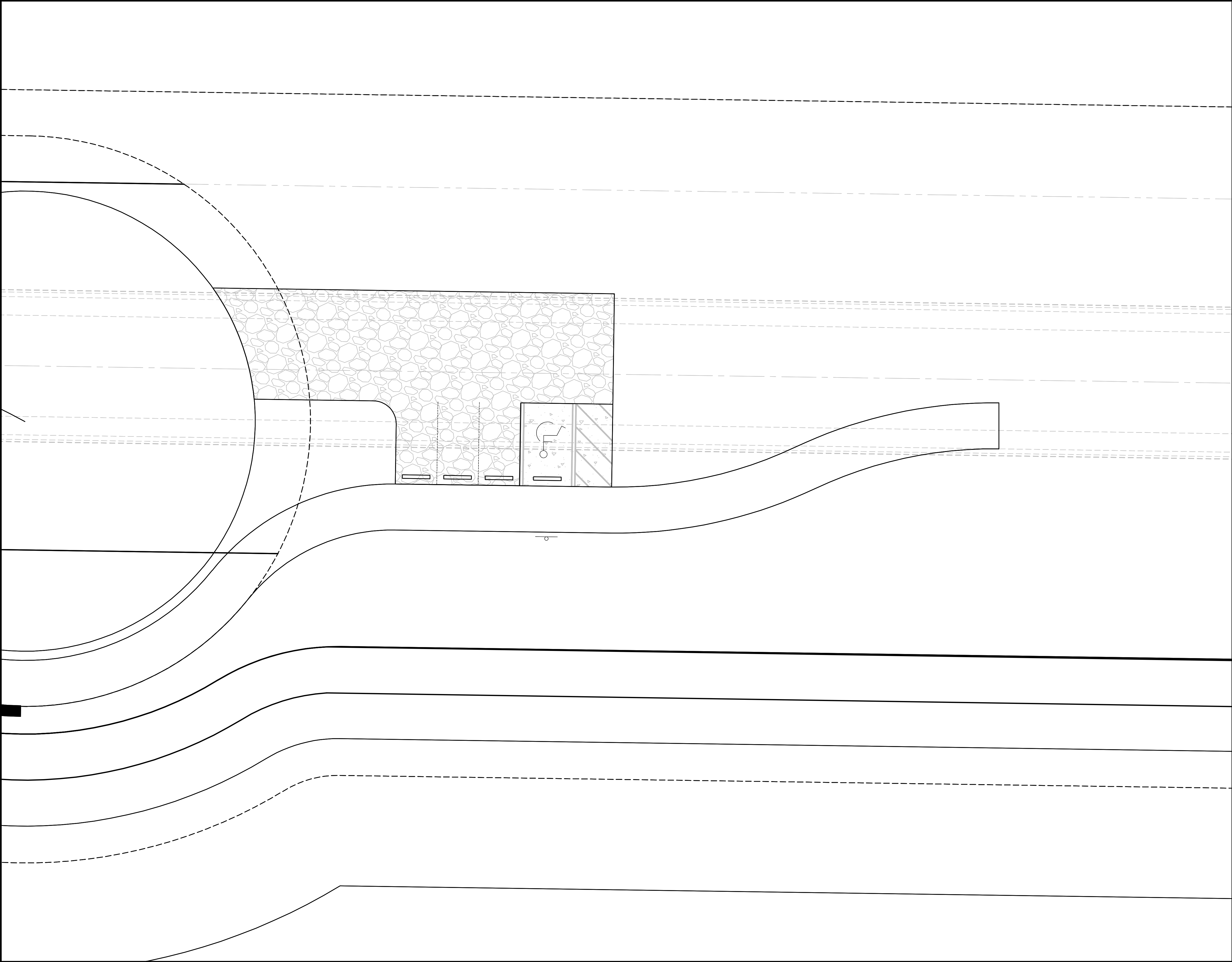
REG- 00002584 LC-0000316

PLANS PREPARED UNDER
THE DIRECTION OF:

REVISIONS:

ETM NO. 19-239-01-055	DRAWN BY: L.L.	DESIGNED BY: L.L.	CHECKED BY: J.F.K.	DATE: MAY 2024
-----------------------	----------------	-------------------	--------------------	----------------

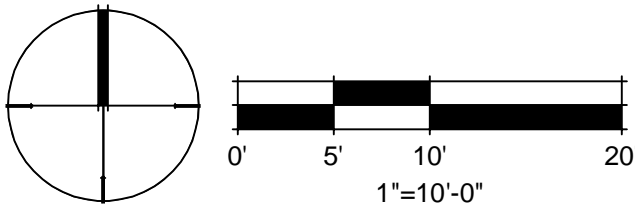
JONATHAN F. KORMAN, P.L.A.
L.A. NUMBER: LA6867357



KEY MAP

N.T.S.

Finish Schedule	
Site Furnishings	
Symbol	Construct
A	Bench
C	Bike Rack
D	Construct reinforced slab edge





KNOW WHAT'S BELOW
ALWAYS CALL 811
BEFORE YOU DIG

It's fast. It's free. It's the law.
www.callsunshine.com

PLANS PREPARED UNDER
THE DIRECTION OF:

JONATHAN F. KORMAN, PLA
L.A. NUMBER: LA6867357

REVISIONS:

ETM NO. 19-239-01-055

DRAWN BY: L.L.

DESIGNED BY: L.L.

CHECKED BY: J.F.K.

DATE: MAY 2024

14775 Old St. Augustine Rd.
Jacksonville, Florida 32258
(904) 642-8990
www.etmnc.com

**Trusted
Advisors,
Creating
Community.**

ETM
ENGLAND-THIMS & MILLER

REG-00002584 LC-0000316

HARDSCAPE PLAN

**WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES**

DRAWING NUMBER
HS-02

19-239-01-055

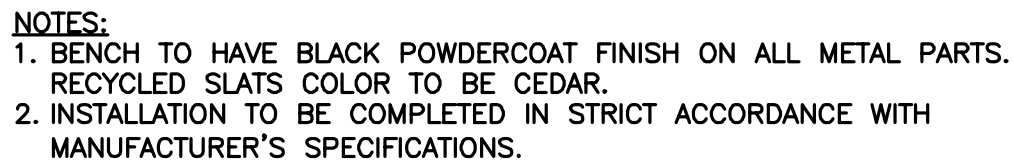
Wildlight Avenue Extension

Plot\19-239-01-055_HS_PLOT.dwg

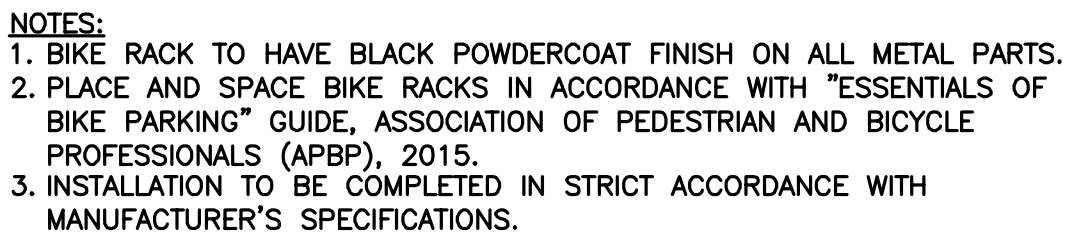
PLOTTED: June 28, 2024

9:12 AM

BY: Anthony Dornes



SCALE: 1/2"=1'-0"



SCALE: 1/2"=1'-0"



HARDSCAPE DETAILS

**WILDLIGHT AVENUE PHASE 4
FOR
RAYDIENT PLACES + PROPERTIES**

DRAWING NUMBER
HS-03

REVISIONS:

ETM NO. 19-239-01-055

77

77.

J.F. B.

024

024

14775 Old St. Augustine Rd.

Jacksonville, Florida 32258

(904) 642-8990

www.etminc.com

REG-00002584 IC-0000316

Trusted
Advisors,
Creating
Community.

ETM
ENGLAND-THIMS & MILLER

PLANS PREPARED UNDER
THE DIRECTION OF:

PLANS PREPARED UNDER
THE DIRECTION OF:

JONATHAN F. KORMAN, PLA
LA NUMBER: 1A6667357

PLOTTED: June 28, 2024 - 9:12 AM, BY: Anthony Dorne